**IF Errors Corrected by the STIC Systems Branch**

Serial Number: _09/778,963_

CRF Processing Date: _____
Edited by: _____
Verified by: _____ (STIC sta

**ENTERED**

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line
- ☐ Edited a format error in the Current Application Data section, specifically: _____
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____.
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: _____
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: _____
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: _____
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: _____
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: _____
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as _____
- ☐ Inserted mandatory headings, specifically: _____
- ☐ Corrected an obvious error in the response, specifically: _____

**RECEIVED**
JUN 1 2 2001
**TECH CENTER 1600/2900**

- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: _____
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: _____
- ☑ Other: _Corrected misaligned amino acid numbering in left margin of sequence # 3._

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

RAW SEQUENCE LISTING         DATE: 05/30/2001
PATENT APPLICATION:  **US/09/778,963**    TIME: 12:13:43

Input Set : **A:\Cpg.pto**
Output Set: **C:\CRF3\05302001\I778963.raw**

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 4 <110> APPLICANT: NEELAM, Beena et al
 6 <120> TITLE OF INVENTION: ISOLATED HUMAN RAS-LIKE PROTEINS,
 7        NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE
 8        PROTEINS, AND USES THEREOF
10 <130> FILE REFERENCE: CL001112
12 <140> CURRENT APPLICATION NUMBER: 09/778,963
13 <141> CURRENT FILING DATE: 2001-02-08
15 <160> NUMBER OF SEQ ID NOS: 5
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20 <211> LENGTH: 3082
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22 <213> ORGANISM: Human
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27 gcagcaggca gctccccgca gctcccggcg cttccaggca gctctctgag ccgtgccaga 180
28 ggcccggccc gccattccca gccccgagcc atgatgaaga ctttgtccag cgggaactgc 240
29 acgctcagtg tgcccgccaa aaactcatac cgcatggtgg tgctgggtgc ctctcgggtg 300
30 ggcaagagct ccatcgtgtc tcgcttcctc aatggccgct ttgaggacca gtacacaccc 360
31 accatcgagg acttccaccg taaggtatac aacatccgcg cgacatgta ccagctcgac 420
32 atcctggata cctctggcaa ccaccccttc cccgccatgc gcaggctgtc catcctcaca 480
33 ggggatgtct tcatcctggt gttcagcctg gataaccggg agtccttcga tgaggtcaag 540
34 cgccttcaga agcagatcct ggaggtcaag tcctgcctga gaacaagac caaggaggcg 600
35 gcggagctgc ccatggtcat ctgtggcaac aagaacgacc acggcgagct gtgccgccag 660
36 gtgcccacca ccgaggccga gctgctggtg tcgggcgacg agaactccgc ctacttcgag 720
37 gtgtcggcca agaagaacac caacgtggac gagatgttct acgtgctctt cagcatggcc 780
38 aagctgccac acgagatgag ccccgccctg catcgcaaga tctccgtgca gtacggtgac 840
39 gccttccacc ccaggccctt ctgcatgcgc cgcgtcaagg agatggacgc ctatggcatg 900
40 gtctcgccct tcgcccgccg ccccagcgtc aacagtgacc tcaagtacat caaggccaag 960
41 gtccttcggg aaggccaggc ccgtgagagg gacaagtgca ccatccagtg agcgagggat 1020
42 gctggggcgg ggcttggcca gtgccttcag ggaggtggcc ccagatgccc actgtgcgca 1080
43 tctccccacc gaggccccgg cagcagtctt gttcacagac cttaggcacc agactggagg 1140
44 cccccgggcg ctggcctccg cacattcgtc tgccttctca cagctttcct gagtccgctt 1200
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48 ggacacagaa ggccagatga gaaaggtctc ctctctcctg gcataacacc cagcttggtt 1440
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50 gcctctgcac cccctcccac ccccagcaca cacacaagtt ggcccccagc tgcgcctgac 1560
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53 gcccgacagt tgtgctttgt tgtggttgca gctgtttcg tgtcatgtat agtagtagaa 1740
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55 ttcagatcca cggcctccac ccgggacgcc ttcctcctct gctcccaaac agggtttccg 1860
56 tggcctgttt gcagctagac attgacctcc gccattgagc tccacggttt acagacaatt 1920
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Input Set : A:\Cpg.pto
Output Set: C:\CRF3\05302001\I778963.raw

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60 catttattaa gcacctactg ggtgctgggt tcactgtgtc ctaggaaacc aagagggtcc 2160
61 ccagtcctgg cctctgcccg cccctgctgc cccaccacct tctgcacaca cagcggtggg 2220
62 gaggcgggga ggagcagctg ggacccagaa ctgagcctgg gagggatccg acagaaaagc 2280
63 tcagggcggg tcttctcctt gtgcccggga ttgggctatg ctgggtacca ccatgtactc 2340
64 aggcatggtg ggttttgaac ccataaacca aaggcccttg tcatcagctc ttaacaagta 2400
65 tattttgtat tttaatctct ctaaacatat tgaagtttta gggccctaag gaaccttagt 2460
66 gatcttctat tgggtctttc tgaggttcag agagggtaag taacttcctc caggtcacac 2520
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68 gctccctctc ttgatgcttg gccctgggg ccttcagggc tttgggacat cttgtcctca 2640
69 accctctccc tagatcagtc tgtgagggtc cctgtagata ttgtgtacac catgcccatg 2700
70 tatatacaag tacacacaga tgtacacaca gatgtacaca tgctccagcc ccagctctgc 2760
71 atacctgcac ctgcacccca gccttggccc ctgcctgcgt ctgtgctcaa agcagcagct 2820
72 ccaaccctgc ctctgtcccc ttccccaccc actgcctgag ccttctgagc agaccaggta 2880
73 ccttggctgc accggtgtgt ggcccgctct cacccaggca cagccccgcc accatggatc 2940
74 tccgtgtaca ctatcaataa aagtgggttt gttacaaaaa aaaaaaaaaa aaaaaaaaaa 3000
75 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3060
76 aaaaaaaaaa aaaaaaaaaa aa                                         3082
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79 <211> LENGTH: 266
80 <212> TYPE: PRT
81 <213> ORGANISM: Human

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87          20                  25                  30
88 Ser Ser Ile Val Ser Arg Phe Leu Asn Gly Arg Phe Glu Asp Gln Tyr
89          35                  40                  45
90 Thr Pro Thr Ile Glu Asp Phe His Arg Lys Val Tyr Asn Ile Arg Gly
91      50                  55                  60
92 Asp Met Tyr Gln Leu Asp Ile Leu Asp Thr Ser Gly Asn His Pro Phe
93 65                  70                  75                  80
94 Pro Ala Met Arg Arg Leu Ser Ile Leu Thr Gly Asp Val Phe Ile Leu
95                  85                  90                  95
96 Val Phe Ser Leu Asp Asn Arg Glu Ser Phe Asp Glu Val Lys Arg Leu
97          100                 105                 110
98 Gln Lys Gln Ile Leu Glu Val Lys Ser Cys Leu Lys Asn Lys Thr Lys
99          115                 120                 125
100 Glu Ala Ala Glu Leu Pro Met Val Ile Cys Gly Asn Lys Asn Asp His
101     130                 135                 140
102 Gly Glu Leu Cys Arg Gln Val Pro Thr Thr Glu Ala Glu Leu Leu Val
103 145                 150                 155                 160
104 Ser Gly Asp Glu Asn Ser Ala Tyr Phe Glu Val Ser Ala Lys Lys Asn
105                 165                 170                 175
106 Thr Asn Val Asp Glu Met Phe Tyr Val Leu Phe Ser Met Ala Lys Leu
107                 180                 185                 190
108 Pro His Glu Met Ser Pro Ala Leu His Arg Lys Ile Ser Val Gln Tyr
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Input Set : A:\Cpg.pto
Output Set: C:\CRF3\05302001\I778963.raw

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111     210              215              220
112 Met Asp Ala Tyr Gly Met Val Ser Pro Phe Ala Arg Arg Pro Ser Val
113 225              230              235              240
114 Asn Ser Asp Leu Lys Tyr Ile Lys Ala Lys Val Leu Arg Glu Gly Gln
115              245              250              255
116 Ala Arg Glu Arg Asp Lys Cys Thr Ile Gln
117          260              265
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121 <211> LENGTH: 11221
122 <212> TYPE: PRT
123 <213> ORGANISM: Human
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129          20               25               30
130 Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys Thr Gly Thr
131     35               40               45
132 Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Gly
133     50               55               60
134 Thr Cys Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys
135 65               70               75               80
136 Cys Cys Cys Thr Cys Thr Cys Thr Gly Thr Cys Thr Cys Ala Cys Thr
137              85               90               95
138 Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys Thr Gly Ala Cys
139          100              105              110
140 Thr Cys Thr Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr
141     115              120              125
142 Cys Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys
143     130              135              140
144 Thr Cys Thr Cys Thr Cys Thr Gly Ala Thr Thr Cys Cys Cys Thr Gly
145 145              150              155              160
146 Cys Cys Thr Cys Thr Thr Thr Gly Ala Cys Cys Cys Thr Cys Thr Gly
147              165              170              175
148 Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Thr Thr Gly Ala Cys Thr
149          180              185              190
150 Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys
151     195              200              205
152 Cys Gly Ala Thr Thr Cys Thr Cys Thr Gly Cys Gly Thr Cys Thr Thr
153     210              215              220
154 Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr
155 225              230              235              240
156 Cys Thr Cys Thr Cys Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Ala
157              245              250              255
158 Ala Gly Cys Thr Cys Ala Thr Thr Cys Ala Gly Thr Cys Ala Thr Thr
159              260              265              270
160 Gly Cys Thr Ala Thr Cys Ala Ala Cys Thr Cys Gly Thr Cys Thr Gly
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161         275                 280                 285
162 Thr Ala Cys Cys Ala Ala Gly Cys Thr Cys Thr Ala Gly Gly Cys Thr
163     290                 295                 300
164 Gly Gly Ala Gly Gly Cys Thr Gly Gly Gly Cys Ala Gly Gly Gly Cys
165 305             310                 315                 320
166 Ala Ala Thr Gly Ala Thr Gly Gly Ala Gly Ala Cys Ala Ala Ala Thr
167             325                 330                 335
168 Ala Cys Thr Gly Thr Cys Cys Cys Thr Gly Gly Gly Ala Gly Cys Thr
169         340                 345                 350
170 Thr Cys Thr Gly Gly Cys Cys Cys Thr Thr Thr Cys Cys Cys Ala
171         355                 360                 365
172 Thr Cys Cys Thr Gly Thr Thr Thr Ala Gly Ala Cys Ala Gly Ala Ala
173     370                 375                 380
174 Gly Thr Gly Ala Cys Cys Gly Cys Cys Ala Gly Cys Ala Gly Ala Gly
175 385             390                 395                 400
176 Thr Cys Ala Ala Gly Cys Thr Gly Thr Cys Thr Gly Cys Ala Gly Ala
177             405                 410                 415
178 Ala Gly Gly Ala Cys Thr Thr Gly Gly Gly Gly Ala Gly Gly Gly Gly
179             420                 425                 430
180 Gly Cys Thr Gly Thr Cys Ala Thr Gly Gly Gly Gly Thr Ala Gly Gly
181         435                 440                 445
182 Gly Cys Thr Thr Cys Thr Thr Thr Cys Cys Cys Cys Cys Cys Ala Thr
183     450                 455                 460
184 Cys Thr Cys Thr Gly Cys Thr Gly Ala Ala Gly Gly Cys Cys Cys Ala
185 465             470                 475                 480
186 Gly Gly Cys Thr Gly Gly Cys Thr Gly Ala Gly Ala Cys Ala Gly Cys
187             485                 490                 495
188 Cys Cys Cys Gly Gly Cys Ala Gly Ala Gly Ala Cys Thr Gly Ala Gly
189         500                 505                 510             .
190 Ala Ala Gly Gly Gly Cys Thr Cys Cys Cys Thr Gly Cys Thr Gly Thr
191         515                 520                 525
192 Gly Gly Thr Cys Thr Gly Gly Cys Ala Gly Cys Cys Cys Cys Cys Thr
193     530                 535                 540
194 Cys Thr Cys Cys Ala Cys Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr
195 545             550                 555                 560
196 Cys Thr Cys Ala Thr Thr Thr Cys Cys Thr Gly Cys Cys Thr Cys Cys
197     .           565                 570                 575
198 Cys Ala Cys Ala Cys Gly Thr Ala Thr Gly Cys Cys Cys Thr Gly Gly .
199             580                 585                 590
200 Gly Cys Ala Cys Cys Thr Cys Ala Thr Cys Ala Gly Gly Gly Cys Thr
201         595                 600                 605
202 Gly Cys Cys Cys Thr Ala Gly Gly Gly Gly Ala Gly Gly Gly Cys Cys
203     610                 615                 620
204 Cys Thr Cys Cys Thr Thr Gly Gly Cys Ala Cys Ala Gly Cys Cys Cys
205 625             630                 635                 640
206 Cys Thr Gly Gly Gly Cys Cys Ala Gly Thr Cys Ala Gly Gly Thr Gly
207             645                 650                 655
208 Gly Thr Thr Gly Ala Gly Gly Cys Thr Gly Ala Gly Gly Ala Gly Ala
209             660                 665                 670
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211         675             680                 685
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213     690                 695                 700
214 Ala Ala Ala Gly Ala Cys Ala Gly Ala Gly Cys Cys Cys Thr Thr Thr
215 705             710                 715                 720
216 Gly Cys Cys Ala Thr Thr Thr Gly Ala Thr Gly Ala Ala Thr Gly Cys
217             725                 730                 735
218 Ala Cys Ala Gly Ala Cys Cys Cys Thr Thr Thr Ala Thr Thr Gly Ala
219             740                 745                 750
220 Gly Cys Cys Cys Cys Thr Gly Cys Thr Cys Thr Gly Thr Thr Cys Ala
221             755                 760                 765
222 Thr Gly Gly Cys Ala Thr Gly Gly Cys Ala Gly Thr Thr Thr Thr Gly
223     770                 775                 780
224 Thr Gly Gly Gly Ala Thr Ala Ala Ala Thr Thr Cys Ala Ala Ala Gly
225 785             790                 795                 800
226 Ala Cys Ala Gly Cys Thr Thr Thr Ala Gly Gly Thr Gly Gly Gly Ala
227             805                 810                 815
228 Gly Cys Thr Gly Gly Gly Thr Gly Gly Gly Gly Gly Ala Thr Gly Thr
229             820                 825                 830
230 Gly Gly Gly Gly Gly Thr Cys Thr Thr Ala Gly Gly Cys Thr Thr Gly
231             835                 840                 845
232 Ala Ala Cys Thr Ala Cys Thr Ala Cys Cys Cys Ala Gly Cys Cys Thr
233     850                 855                 860
234 Cys Cys Thr Thr Thr Gly Thr Thr Ala Ala Cys Cys Ala Ala Gly Thr
235 865                 870                 875                 880
236 Ala Gly Cys Thr Ala Gly Thr Cys Ala Cys Gly Thr Ala Gly Cys Cys
237             885                 890                 895
238 Thr Thr Cys Thr Gly Ala Gly Cys Thr Cys Gly Gly Gly Gly Cys Ala
239             900                 905                 910
240 Gly Ala Cys Cys Ala Cys Cys Thr Gly Gly Gly Ala Thr Cys Ala Ala
241             915                 920                 925
242 Ala Cys Cys Thr Cys Thr Cys Cys Thr Cys Thr Gly Cys Thr Gly Gly
243     930                 935                 940
244 Thr Thr Ala Cys Thr Gly Gly Cys Thr Gly Thr Gly Cys Ala Ala Cys
245 945                 950                 955                 960
246 Thr Gly Thr Ala Ala Gly Cys Ala Ala Gly Thr Ala Ala Thr Thr Thr
247             965                 970                 975
248 Ala Ala Cys Cys Thr Cys Thr Cys Thr Gly Thr Gly Cys Cys Thr Cys
249     980                 985                 990
250 Ala Gly Thr Thr Thr Cys Cys Thr Cys Ala Thr Cys Thr Gly Thr Ala
251     995                 1000                1005
252 Ala Ala Thr Thr Gly Gly Ala Gly Ala Ala Thr Ala Ala Cys Ala Cys
253     1010                1015                1020
254 Cys Ala Cys Cys Thr Gly Cys Thr Thr Thr Cys Thr Gly Gly Gly Gly
255 1025                1030                1035                1040
256 Thr Thr Ala Thr Gly Ala Ala Gly Gly Gly Ala Gly Ala Ala Ala Thr
257             1045                1050                1055
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**VERIFICATION SUMMARY**
PATENT APPLICATION: US/09/778,963

DATE: 05/30/2001
TIME: 12:13:44

Input Set : A:\Cpg.pto
Output Set: C:\CRF3\05302001\I778963.raw

1645

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        RAW SEQUENCE LISTING                DATE: 05/17/2001
        PATENT APPLICATION:  US/09/778,963  TIME: 08:43:07

        Input Set : A:\Seqlist.txt
        Output Set: N:\CRF3\05172001\I778963.raw

  4 <110> APPLICANT: NEELAM, Beena et al
  6 <120> TITLE OF INVENTION: ISOLATED HUMAN RAS-LIKE PROTEINS,
  7       NUCLEIC ACID MOLECULES ENCODING THESE HUMAN RAS-LIKE
  8       PROTEINS, AND USES THEREOF
 10 <130> FILE REFERENCE: CL001112
 12 <140> CURRENT APPLICATION NUMBER: 09/778,963
 13 <141> CURRENT FILING DATE: 2001-02-08
 15 <160> NUMBER OF SEQ ID NOS: 5
 17 <170> SOFTWARE: FastSEQ for Windows Version 4.0


ERRORED SEQUENCES

120 <210> SEQ ID NO: 3
121 <211> LENGTH: 11221
122 <212> TYPE: PRT
123 <213> ORGANISM: Human
125 <400> SEQUENCE: 3
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130 Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys Thr Gly Thr
131         35                  40                  45
132 Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Gly
133      50                  55                  60
134 Thr Cys Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys
135 65                  70                  75                  80
136 Cys Cys Cys Thr Cys Thr Cys Thr Gly Thr Cys Thr Cys Ala Cys Thr
137             85                  90                  95
138 Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys Thr Gly Ala Cys
139         100                 105                 110
140 Thr Cys Thr Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr
141         115                 120                 125
142 Cys Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys
143      130                 135                 140
144 Thr Cys Thr Cys Thr Cys Thr Gly Ala Thr Thr Cys Cys Cys Thr Gly
145 145                 150                 155                 160
146 Cys Cys Thr Cys Thr Thr Thr Gly Ala Cys Cys Cys Thr Cys Thr Gly
147             165                 170                 175
148 Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Thr Thr Gly Ala Cys Thr
149             180                 185                 190
150 Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr Cys
151         195                 200                 205
152 Cys Gly Ala Thr Thr Cys Thr Cys Thr Gly Cys Gly Thr Cys Thr Thr
153      210                 215                 220
154 Thr Gly Ala Cys Thr Cys Cys Cys Thr Gly Cys Cys Thr Cys Cys Thr
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RAW SEQUENCE LISTING                    DATE: 05/17/2001
PATENT APPLICATION:  US/09/778,963      TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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159             260                   265                   270
160 Gly Cys Thr Ala Thr Cys Ala Ala Cys Thr Cys Gly Thr Cys Thr Gly
161             275                   280                   285
162 Thr Ala Cys Cys Ala Ala Gly Cys Thr Cys Thr Ala Gly Gly Cys Thr
163       290                   295                   300
164 Gly Gly Ala Gly Gly Cys Thr Gly Gly Gly Cys Ala Gly Gly Gly Cys
165 305                   310                   315                   320
166 Ala Ala Thr Gly Ala Thr Gly Gly Ala Gly Ala Cys Ala Ala Ala Thr
167                   325                   330                   335
168 Ala Cys Thr Gly Thr Cys Cys Cys Thr Gly Gly Gly Ala Gly Cys Thr
169             340                   345                   350
170 Thr Cys Thr Gly Gly Cys Cys Cys Cys Thr Thr Thr Cys Cys Cys Ala
171             355                   360                   365
172 Thr Cys Cys Thr Gly Thr Thr Thr Ala Gly Ala Cys Ala Gly Ala Ala
173       370                   375                   380
174 Gly Thr Gly Ala Cys Cys Gly Cys Cys Ala Gly Cys Ala Gly Ala Gly
175 385                   390                   395                   400
176 Thr Cys Ala Ala Gly Cys Thr Gly Thr Cys Thr Gly Cys Ala Gly Ala
177             405                   410                   415
178 Ala Gly Gly Ala Cys Thr Thr Gly Gly Gly Gly Ala Gly Gly Gly Gly
179             420                   425                   430
180 Gly Cys Thr Gly Thr Cys Ala Thr Gly Gly Gly Gly Thr Ala Gly Gly
181             435                   440                   445
182 Gly Cys Thr Thr Cys Thr Thr Thr Cys Cys Cys Cys Cys Cys Ala Thr
183       450                   455                   460
184 Cys Thr Cys Thr Gly Cys Thr Gly Ala Ala Gly Gly Cys Cys Cys Ala
185 465                   470                   475                   480
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187             485                   490                   495
188 Cys Cys Cys Gly Gly Cys Ala Gly Ala Gly Ala Cys Thr Gly Ala Gly
189             500                   505                   510
190 Ala Ala Gly Gly Gly Cys Thr Cys Cys Cys Thr Gly Cys Thr Gly Thr
191             515                   520                   525
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193       530                   535                   540
194 Cys Thr Cys Cys Ala Cys Cys Cys Thr Cys Cys Thr Cys Thr Cys Thr
195 545                   550                   555                   560
196 Cys Thr Cys Ala Thr Thr Thr Cys Cys Thr Gly Cys Cys Thr Cys Cys
197             565                   570                   575
198 Cys Ala Cys Ala Cys Gly Thr Ala Thr Gly Cys Cys Cys Thr Gly Gly
199             580                   585                   590
200 Gly Cys Ala Cys Cys Thr Cys Ala Thr Cys Ala Gly Gly Gly Cys Thr
201             595                   600                   605
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RAW SEQUENCE LISTING          DATE: 05/17/2001
PATENT APPLICATION:  US/09/778,963     TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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209             660                 665                 670
210 Gly Ala Ala Gly Gly Thr Cys Cys Cys Ala Gly Ala Gly Thr Gly Gly
211         675                 680                 685
212 Gly Gly Cys Thr Thr Cys Ala Gly Gly Cys Ala Ala Ala Cys Cys Cys
213     690                 695                 700
214 Ala Ala Ala Gly Ala Cys Ala Gly Ala Gly Cys Cys Cys Thr Thr Thr
215 705                 710                 715                 720
216 Gly Cys Cys Ala Thr Thr Thr Gly Ala Thr Gly Ala Ala Thr Gly Cys
217             725                 730                 735
218 Ala Cys Ala Gly Ala Cys Cys Cys Thr Thr Thr Ala Thr Thr Gly Ala
219             740                 745                 750
220 Gly Cys Cys Cys Cys Thr Gly Cys Thr Cys Thr Gly Thr Thr Cys Ala
221         755                 760                 765
222 Thr Gly Gly Cys Ala Thr Gly Gly Cys Ala Gly Thr Thr Thr Thr Gly
223     770                 775                 780
224 Thr Gly Gly Gly Ala Thr Ala Ala Ala Thr Thr Cys Ala Ala Ala Gly
225 785                 790                 795                 800
226 Ala Cys Ala Gly Cys Thr Thr Thr Ala Gly Gly Thr Gly Gly Gly Ala
227             805                 810                 815
228 Gly Cys Thr Gly Gly Gly Thr Gly Gly Gly Gly Gly Ala Thr Gly Thr
229             820                 825                 830
230 Gly Gly Gly Gly Gly Thr Cys Thr Thr Ala Gly Gly Cys Thr Thr Gly
231         835                 840                 845
232 Ala Ala Cys Thr Ala Cys Thr Ala Cys Cys Cys Ala Gly Cys Cys Thr
233     850                 855                 860
234 Cys Cys Thr Thr Thr Gly Thr Thr Ala Ala Cys Cys Ala Ala Gly Thr
235 865                 870                 875                 880
236 Ala Gly Cys Thr Ala Gly Thr Cys Ala Cys Gly Thr Ala Gly Cys Cys
237             885                 890                 895
238 Thr Thr Cys Thr Gly Ala Gly Cys Thr Cys Gly Gly Gly Gly Cys Ala
239             900                 905                 910
240 Gly Ala Cys Cys Ala Cys Cys Thr Gly Gly Gly Ala Thr Cys Ala Ala
241         915                 920                 925
242 Ala Cys Cys Thr Cys Thr Cys Thr Cys Thr Gly Cys Thr Gly Gly
243     930                 935                 940
244 Thr Thr Ala Cys Thr Gly Gly Cys Thr Gly Thr Gly Cys Ala Ala Cys
245 945                 950                 955                 960
246 Thr Gly Thr Ala Ala Gly Cys Ala Ala Gly Thr Ala Ala Thr Thr Thr
247         965                 970                 975
248 Ala Ala Cys Cys Thr Cys Thr Cys Thr Gly Thr Gly Cys Cys Thr Cys
249         980                 985                 990
250 Ala Gly Thr Thr Thr Cys Cys Thr Cys Ala Thr Cys Thr Gly Thr Ala
251         995                 1000                1005
252 Ala Ala Thr Thr Gly Gly Ala Gly Ala Ala Thr Ala Ala Cys Ala Cys
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Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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255 1025         1030                1035                1040
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257           1045                1050                1055
258 Ala Gly Gly Thr Thr Ala Ala Cys Ala Thr Gly Thr Gly Thr Gly Cys
259           1060                1065                1070
260 Ala Gly Cys Ala Cys Thr Thr Ala Gly Ala Ala Cys Ala Cys Thr Cys
261         1075                1080                1085
262 Thr Gly Gly Cys Ala Thr Ala Thr Thr Thr Thr Ala Gly Cys Thr Gly
263      1090                1095                1100
264 Cys Ala Ala Ala Ala Thr Gly Ala Ala Thr Gly Cys Cys Ala Gly Cys
265 1105             1110                1115                1120
266 Thr Ala Thr Gly Ala Thr Thr Ala Thr Thr Thr Cys Thr Ala Thr Ala
267               1125                1130                1135
268 Cys Thr Thr Ala Gly Thr Gly Cys Gly Gly Gly Gly Cys Thr Thr Gly
269            1140                1145                1150
270 Gly Cys Ala Cys Ala Cys Thr Gly Cys Ala Thr Gly Gly Gly Cys Thr
271         1155                1160                1165
272 Cys Ala Ala Gly Thr Gly Gly Cys Ala Gly Cys Ala Gly Thr Thr Gly
273      1170                1175                1180
274 Thr Cys Gly Thr Cys Cys Thr Thr Gly Thr Gly Gly Cys Thr Cys Cys
275 1185             1190                1195                1200
276 Ala Gly Gly Cys Cys Thr Gly Gly Gly Gly Thr Cys Cys Gly Cys Cys
277               1205                1210                1215
278 Gly Thr Gly Thr Gly Cys Thr Gly Ala Gly Cys Thr Gly Gly Cys Thr
279            1220                1225                1230
280 Thr Ala Thr Thr Gly Thr Gly Cys Ala Cys Gly Thr Cys Cys Cys Thr
281         1235                1240                1245
282 Thr Thr Gly Thr Gly Ala Thr Thr Cys Ala Thr Thr Cys Ala Thr Cys
283      1250                1255                1260
284 Gly Ala Ala Gly Thr Cys Ala Cys Ala Thr Thr Ala Gly Thr Ala Gly
285 1265             1270                1275                1280
286 Cys Thr Thr Ala Gly Ala Ala Gly Thr Gly Ala Cys Cys Gly Thr Ala
287            1285                1290                1295
288 Gly Thr Gly Gly Gly Ala Gly Cys Ala Thr Thr Thr Ala Cys Gly Cys
289            1300                1305                1310
290 Cys Ala Thr Gly Gly Ala Ala Ala Thr Thr Gly Gly Cys Ala Ala Thr
291      1315                1320                1325
292 Ala Gly Gly Gly Cys Thr Thr Thr Thr Ala Ala Cys Ala Ala Ala Gly
293      1330                .1335                1340
294 Gly Thr Ala Thr Thr Thr Thr Thr Gly Ala Gly Ala Gly Cys Cys Gly
295 1345             1350                1355                1360
296 Gly Thr Thr Thr Cys Cys Thr Gly Cys Ala Cys Ala Gly Ala Gly Gly
297            1365                1370                1375
298 Cys Thr Gly Gly Thr Ala Gly Thr Thr Gly Gly Gly Cys Ala Gly Gly
299         1380                1385                1390
300 Gly Thr Gly Ala Gly Cys Ala Gly Ala Thr Cys Cys Ala Gly Ala Thr
301      1395                1400                1405
```

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302 Gly Thr Gly Thr Gly Cys Cys Ala Gly Gly Gly Ala Cys Thr Cys Gly
303      1410               1415               1420
304 Cys Ala Cys Gly Cys Ala Gly Gly Cys Ala Ala Thr Cys Thr Cys Thr
305 1425               1430               1435               1440
306 Cys Cys Ala Cys Cys Thr Cys Cys Ala Gly Thr Gly Gly Cys Cys Ala
307               1445               1450               1455
308 Thr Cys Thr Cys Ala Gly Ala Cys Cys Thr Thr Ala Gly Cys Thr Thr
309               1460               1465               1470
310 Cys Ala Thr Gly Ala Thr Ala Gly Cys Cys Ala Gly Gly Ala Ala Gly
311      1475               1480               1485
312 Cys Gly Ala Thr Gly Gly Thr Gly Thr Thr Gly Gly Ala Ala Ala Gly
313      1490               1495               1500
314 Cys Gly Cys Cys Thr Thr Gly Gly Gly Thr Cys Ala Ala Thr Gly Gly
315 1505               1510               1515               1520
316 Gly Cys Gly Ala Gly Gly Cys Ala Cys Thr Cys Ala Ala Gly Gly Ala
317               1525               1530               1535
318 Ala Ala Cys Cys Gly Ala Cys Thr Thr Gly Gly Gly Gly Cys Ala Thr
319               1540               1545               1550
320 Cys Cys Thr Gly Gly Gly Gly Thr Gly Gly Gly Gly Ala Ala Cys Gly
321          1555               1560               1565
322 Ala Gly Thr Thr Thr Gly Gly Gly Cys Ala Cys Ala Thr Ala Cys Ala
323      1570               1575               1580
324 Gly Cys Cys Cys Thr Thr Thr Gly Thr Gly Thr Gly Ala Ala Thr Thr
325 1585               1590               1595               1600
326 Thr Ala Ala Ala Ala Ala Cys Ala Gly Thr Gly Cys Cys Thr Thr Thr
327               1605               1610               1615
328 Thr Cys Cys Thr Cys Thr Ala Cys Ala Cys Ala Ala Gly Ala Thr Gly
329               1620               1625               1630
330 Cys Cys Cys Thr Thr Thr Cys Gly Thr Cys Thr Gly Gly Gly Ala Thr
331          1635               1640               1645
332 Ala Cys Ala Gly Cys Cys Cys Cys Cys Ala Cys Cys Thr Cys Thr Gly
333      1650               1655               1660
334 Gly Gly Ala Thr Gly Cys Ala Gly Cys Cys Cys Cys Cys Ala Cys Thr
335 1665               1670               1675               1680
336 Thr Gly Cys Cys Cys Ala Cys Cys Cys Ala Gly Cys Cys Ala Thr Gly
337               1685               1690               1695
338 Cys Gly Cys Cys Thr Thr Gly Thr Gly Cys Ala Gly Thr Ala Thr Cys
339          1700               1705               1710
340 Cys Ala Ala Cys Cys Thr Gly Cys Ala Cys Ala Ala Cys Cys Thr Gly
341      1715               1720               1725
342 Thr Gly Gly Cys Ala Gly Cys Cys Thr Gly Thr Gly Gly Ala Ala Gly
343      1730               1735               1740
344 Ala Cys Cys Gly Ala Gly Gly Gly Gly Ala Thr Thr Gly Ala Thr Ala
345 1745               1750               1755               1760
346 Thr Thr Thr Cys Ala Gly Cys Ala Gly Gly Cys Cys Thr Gly Thr Gly
347               1765               1770               1775
348 Cys Cys Cys Ala Thr Thr Thr Gly Cys Ala Gly Thr Thr Cys Ala Gly
349               1780               1785               1790
350 Gly Gly Gly Cys Thr Gly Gly Ala Ala Ala Gly Cys Thr Cys Thr Cys
```

RAW SEQUENCE LISTING                    DATE: 05/17/2001
PATENT APPLICATION:  US/09/778,963      TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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351          1795                1800                1805
352 Cys Thr Cys Thr Gly Gly Ala Gly Ala Gly Gly Gly Gly Ala Gly Gly
353      1810                1815                1820
354 Gly Ala Thr Thr Cys Cys Thr Gly Cys Ala Ala Gly Gly Gly Thr Gly
355 1825                1830                1835                1840
356 Ala Gly Gly Ala Gly Ala Thr Cys Ala Gly Ala Gly Ala Gly Gly Cys
357                1845                1850                1855
358 Cys Thr Thr Cys Ala Gly Ala Gly Ala Cys Ala Gly Gly Thr Gly
359           1860                1865                1870
360 Gly Cys Ala Cys Thr Thr Gly Ala Gly Cys Cys Ala Gly Ala Cys Cys
361      1875              .     1880                1885
362 Cys Thr Gly Ala Ala Ala Cys Ala Thr Ala Ala Gly Gly Gly Gly Ala
363      1890                1895                1900
364 Ala Gly Ala Gly Gly Gly Thr Gly Thr Thr Cys Thr Gly Cys Ala Gly
365 1905                1910                1915                1920
366 Ala Gly Gly Gly Gly Thr Gly Gly Cys Ala Thr Gly Ala Gly Cys Ala
367                1925                1930                1935
368 Ala Ala Gly Gly Ala Gly Thr Gly Gly Ala Gly Gly Cys Thr Gly Ala
369           1940                1945                1950
370 Thr Cys Thr Cys Ala Gly Cys Ala Gly Ala Gly Cys Thr Cys Ala Ala
371           1955                1960                1965       .
372 Ala Cys Thr Gly Ala Cys Gly Ala Gly Gly Gly Thr Gly Ala Cys Thr
373      1970                1975                1980
374 Gly Gly Gly Gly Thr Cys Ala Gly Gly Gly Gly Thr Thr Cys Thr Gly
375 1985                1990                1995                2000
376 Gly Gly Gly Cys Gly Gly Gly Gly Ala Thr Thr Cys Thr Gly Gly Thr
377                2005                2010                2015
378 Gly Gly Gly Cys Gly Cys Thr Ala Ala Gly Gly Thr Ala Gly Gly Ala
379           2020                2025                2030
380 Ala Ala Gly Gly Ala Gly Gly Gly Ala Gly Gly Gly Cys Thr Gly Gly
381           2035                2040                2045
382 Gly Cys Thr Gly Thr Gly Ala Ala Gly Ala Gly Cys Cys Thr Thr Thr
383      2050                2055                2060
384 Gly Gly Gly Gly Thr Gly Ala Gly Cys Cys Thr Gly Gly Thr Gly Gly
385 2065                2070                2075                2080
386 Ala Gly Cys Cys Thr Gly Cys Gly Gly Gly Thr Thr Thr Gly Cys Thr
387                2085                2090                2095    .
388 Thr Ala Thr Ala Cys Ala Ala Gly Ala Gly Cys Thr Thr Gly Gly Ala
389           2100                2105                2110
390 Thr Cys Cys Ala Thr Gly Thr Cys Gly Cys Gly Cys Thr Cys Thr Thr
391           2115                2120                2125       .
392 Thr Cys Ala Thr Gly Ala Gly Gly Thr Cys Ala Ala Gly Ala Gly Gly
393      2130                2135                2140
394 Cys Thr Cys Cys Cys Ala Thr Ala Gly Ala Ala Ala Gly Cys Thr Cys
395 2145                2150                2155                2160
396 Thr Gly Ala Gly Thr Thr Thr Gly Cys Cys Cys Cys Ala Gly Ala Ala
397                2165          .     2170                2175
398 Cys Cys Ala Thr Ala Ala Cys Cys Cys Thr Thr Gly Gly Ala Gly Ala
399           2180                2185                2190
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RAW SEQUENCE LISTING
PATENT APPLICATION:  US/09/778,963

DATE: 05/17/2001
TIME: 08:43:07

Input Set : **A:\Seqlist.txt**
Output Set: **N:\CRF3\05172001\I778963.raw**

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400 Thr Gly Gly Gly Ala Gly Gly Gly Ala Ala Gly Cys Thr Thr Gly Ala
401      2195              2200              2205
402 Gly Cys Cys Ala Gly Cys Cys Ala Thr Gly Gly Gly Thr Cys Gly Thr
403      2210              2215              2220
404 Thr Cys Cys Cys Cys Ala Thr Thr Cys Cys Ala Cys Ala Thr Cys Cys
405 2225              2230              2235              2240
406 Thr Cys Thr Ala Cys Thr Cys Cys Gly Gly Gly Cys Cys Thr Cys Thr
407              2245              2250              2255
408 Gly Gly Gly Thr Cys Thr Cys Cys Thr Gly Gly Ala Gly Gly Cys Ala
409              2260              2265              2270
410 Ala Gly Thr Ala Ala Ala Cys Ala Cys Cys Thr Ala Gly Gly Gly Cys
411      2275              2280              2285
412 Cys Thr Gly Gly Gly Ala Gly Gly Cys Ala Ala Ala Ala Ala Thr Ala
413      2290              2295              2300
414 Thr Cys Cys Gly Gly Gly Cys Ala Gly Gly Thr Cys Ala Thr Gly Gly
415 2305              2310              2315              2320
416 Ala Gly Cys Gly Gly Ala Gly Gly Gly Ala Gly Cys Cys Cys Gly Cys
417              2325              2330              2335
418 Cys Ala Gly Ala Thr Gly Cys Ala Gly Ala Gly Cys Ala Cys Ala Gly
419              2340              2345              2350
420 Gly Thr Cys Thr Ala Ala Ala Gly Gly Thr Gly Gly Gly Thr Cys Cys
421      2355              2360              2365
422 Thr Cys Cys Thr Gly Ala Gly Gly Thr Gly Gly Cys Thr Gly Cys Ala
423      2370              2375              2380
424 Gly Gly Ala Gly Cys Ala Ala Cys Cys Cys Cys Ala Gly Gly Cys Ala
425 2385              2390              2395              2400
426 Thr Thr Gly Gly Gly Cys Thr Thr Gly Gly Ala Gly Cys Ala Thr Gly
427              2405              2410              2415
428 Cys Gly Gly Thr Gly Thr Gly Gly Ala Cys Ala Thr Ala Gly Cys Cys
429              2420              2425              2430
430 Thr Thr Cys Cys Cys Thr Thr Cys Thr Thr Cys Cys Cys Ala Gly Gly
431      2435              2440              2445
432 Ala Gly Gly Gly Cys Thr Gly Ala Ala Thr Gly Gly Cys Cys Ala Cys
433      2450              2455              2460
434 Ala Gly Ala Ala Cys Cys Ala Cys Cys Cys Cys Thr Gly Cys Cys
435 2465              2470              2475              2480
436 Cys Cys Ala Gly Gly Cys Thr Thr Ala Ala Gly Ala Ala Ala Thr Gly
437              2485              2490              2495
438 Cys Ala Thr Gly Cys Thr Ala Gly Thr Gly Cys Cys Thr Thr Cys Cys
439              2500              2505              2510
440 Cys Cys Ala Thr Gly Thr Cys Thr Thr Ala Thr Cys Cys Thr Ala Gly
441      2515              2520              2525
442 Ala Ala Thr Cys Ala Cys Ala Gly Gly Cys Thr Cys Cys Gly Gly Gly
443      2530              2535              2540
444 Ala Ala Ala Gly Cys Cys Ala Gly Ala Thr Gly Gly Ala Thr Gly Ala
445 2545              2550              2555              2560
446 Ala Cys Cys Ala Gly Gly Gly Ala Ala Ala Gly Ala Ala Cys Gly Gly
447              2565              2570              2575
448 Ala Thr Thr Cys Thr Cys Ala Cys Cys Ala Thr Ala Gly Ala Thr Ala
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449              2580              2585              2590
450 Cys Cys Ala Thr Thr Thr Thr Thr Gly Ala Gly Ala Thr Thr Cys
451         2595              2600              2605
452 Ala Cys Cys Ala Thr Gly Thr Gly Cys Thr Gly Ala Gly Cys Cys Cys
453     2610              2615              2620
454 Thr Thr Thr Gly Cys Ala Ala Cys Ala Ala Cys Thr Cys Thr Ala Thr
455 2625              2630              2635              2640
456 Gly Ala Ala Thr Thr Gly Gly Gly Cys Thr Cys Ala Thr Thr Thr Thr
457              2645              2650              2655
458 Gly Cys Ala Gly Ala Thr Gly Ala Gly Ala Ala Ala Ala Gly Thr Gly
459         2660              2665              2670
460 Ala Cys Thr Thr Cys Thr Ala Gly Ala Gly Ala Gly Gly Thr Thr Ala
461         2675              2680              2685
462 Ala Gly Cys Thr Ala Cys Thr Ala Gly Cys Cys Cys Ala Ala Gly Ala
463     2690              2695              2700
464 Thr Cys Ala Gly Thr Ala Gly Cys Thr Ala Gly Ala Gly Gly Cys Ala
465 2705              2710              2715              2720
466 Ala Gly Gly Cys Ala Ala Gly Gly Ala Thr Thr Cys Ala Ala Ala Thr
467              2725              2730              2735
468 Cys Cys Cys Ala Gly Gly Ala Gly Thr Cys Cys Gly Gly Thr Gly Cys
469         2740              2745              2750
470 Thr Thr Gly Cys Ala Thr Ala Ala Ala Thr Gly Ala Ala Ala Gly Gly
471         2755              2760              2765
472 Ala Thr Gly Ala Ala Thr Gly Ala Ala Cys Gly Gly Ala Thr Ala Thr
473     2770              2775              2780
474 Thr Gly Ala Gly Thr Gly Ala Gly Thr Gly Ala Gly Thr Gly Gly Ala
475 2785              2790              2795              2800
476 Thr Gly Ala Ala Gly Gly Ala Ala Gly Gly Ala Gly Thr Ala Ala Ala
477              2805              2810              2815
478 Gly Gly Ala Gly Ala Gly Gly Gly Cys Ala Thr Gly Ala Ala Thr Gly
479         2820              2825              2830
480 Ala Ala Thr Gly Ala Gly Ala Gly Gly Gly Thr Ala Gly Ala Ala Cys
481         2835              2840              2845
482 Thr Cys Cys Ala Ala Gly Ala Cys Cys Cys Cys Thr Thr Ala Gly Ala
483     2850              2855              2860
484 Ala Cys Cys Thr Cys Gly Thr Cys Thr Gly Ala Thr Gly Thr Thr Cys
485 2865              2870              2875              2880
486 Cys Cys Ala Thr Thr Thr Ala Cys Ala Gly Ala Cys Ala Gly Ala
487              2885              2890              2895
488 Ala Ala Ala Cys Thr Gly Ala Gly Thr Cys Cys Thr Ala Gly Ala Cys
489         2900              2905              2910
490 Ala Gly Ala Gly Gly Cys Cys Thr Ala Gly Ala Gly Gly Ala Gly Gly
491         2915              2920              2925
492 Cys Cys Ala Ala Gly Ala Gly Gly Thr Gly Gly Thr Gly Gly Gly Gly
493     2930              2935              2940
494 Cys Cys Ala Gly Gly Thr Cys Gly Gly Gly Gly Gly Gly Gly Cys Cys
495 2945              2950              2955              2960
496 Cys Thr Gly Ala Thr Gly Cys Cys Thr Gly Cys Thr Thr Cys Thr Cys
497              2965              2970              2975
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498 Thr Cys Gly Cys Thr Thr Thr Gly Thr Thr Gly Cys Ala Gly Cys Cys
499         2980            2985            2990
500 Cys Cys Gly Ala Gly Cys Cys Ala Thr Gly Ala Thr Gly Ala Ala Gly
501         2995            3000            3005
502 Ala Cys Thr Thr Thr Gly Thr Cys Cys Ala Gly Cys Gly Gly Gly Ala
503    3010            3015            3020
504 Ala Cys Thr Gly Cys Ala Cys Gly Cys Thr Cys Ala Gly Thr Gly Thr
505 3025            3030            3035            3040
506 Gly Cys Cys Cys Gly Cys Cys Ala Ala Ala Ala Ala Cys Thr Cys Ala
507             3045            3050            3055
508 Thr Ala Cys Cys Gly Cys Ala Thr Gly Gly Thr Gly Gly Thr Gly Cys
509         3060            3065            3070
510 Thr Gly Gly Gly Thr Gly Cys Cys Thr Cys Thr Cys Gly Gly Gly Thr
511         3075            3080            3085
512 Gly Gly Gly Cys Ala Ala Gly Ala Gly Cys Thr Cys Cys Ala Thr Cys
513    3090            3095            3100
514 Gly Thr Gly Thr Cys Thr Cys Gly Cys Thr Thr Cys Cys Thr Cys Ala
515 3105            3110            3115            3120
516 Ala Thr Gly Gly Cys Cys Gly Cys Thr Thr Thr Gly Ala Gly Gly Ala
517             3125            3130            3135
518 Cys Cys Ala Gly Thr Ala Cys Ala Cys Ala Cys Cys Cys Ala Cys Cys
519         3140            3145            3150
520 Ala Thr Cys Gly Ala Gly Gly Ala Cys Thr Thr Cys Cys Ala Cys Cys
521         3155            3160            3165
522 Gly Thr Ala Ala Gly Gly Thr Ala Thr Ala Cys Ala Ala Cys Ala Thr
523   . 3170            3175            3180
524 Cys Cys Gly Cys Gly Gly Cys Gly Ala Cys Ala Thr Gly Thr Ala Cys
525 3185            3190            3195            3200
526 Cys Ala Gly Cys Thr Cys Gly Ala Cys Ala Thr Cys Cys Thr Gly Gly
527             3205            3210            3215
528 Ala Thr Ala Cys Cys Thr Cys Thr Gly Gly Cys Ala Ala Cys Cys Ala
529         3220            3225            3230
530 Cys Cys Cys Cys Thr Thr Cys Cys Cys Cys Gly Cys Cys Ala Thr Gly
531         3235            3240            3245
532 Cys Gly Cys Ala Gly Gly Cys Thr Gly Thr Cys Cys Ala Thr Cys Cys
533    3250            3255            3260
534 Thr Cys Ala Cys Ala Gly Gly Thr Gly Ala Gly Gly Cys Cys Cys Ala
535 3265            3270            3275            3280
536 Cys Thr Gly Gly Thr Gly Cys Cys Thr Gly Gly Gly Cys Thr Gly Gly
537             3285            3290            3295
538 Gly Gly Cys Gly Gly Cys Ala Gly Gly Gly Cys Cys Ala Gly Gly Gly
539             3300            3305            3310
540 Cys Ala Thr Gly Gly Gly Thr Gly Cys Gly Gly Ala Gly Thr Gly Thr
541         3315            3320            3325
542 Gly Cys Thr Gly Gly Gly Cys Ala Cys Thr Thr Gly Gly Cys Ala Gly
543    3330            3335            3340
544 Thr Thr Thr Gly Cys Ala Thr Ala Gly Ala Cys Thr Thr Gly Cys Ala
545 3345            3350            3355            3360
546 Thr Ala Gly Cys Cys Ala Thr Cys Gly Thr Cys Thr Gly Ala Gly Ala
```

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547              3365              3370              3375
548 Cys Ala Gly Gly Cys Gly Thr Cys Ala Thr Cys Cys Cys Thr Gly Cys
549        3380              3385              3390
550 Ala Cys Ala Ala Thr Gly Ala Gly Gly Cys Thr Cys Ala Gly Ala Gly
551     3395              3400              3405
552 Ala Gly Gly Thr Thr Thr Thr Gly Cys Cys Ala Thr Gly Thr Gly Cys
553     3410              3415              3420
554 Thr Gly Gly Ala Ala Ala Thr Ala Gly Thr Gly Ala Thr Gly Ala Ala
555 3425              3430              3435              3440
556 Gly Thr Cys Gly Gly Gly Gly Gly Cys Cys Cys Gly Ala Thr Thr
557        3445              3450              3455
558 Cys Cys Ala Thr Thr Cys Thr Gly Thr Thr Ala Gly Ala Cys Thr Cys
559        3460              3465              3470
560 Cys Ala Gly Ala Thr Cys Gly Ala Thr Thr Ala Cys Thr Cys Ala Thr
561        3475              3480              3485
562 Gly Gly Cys Thr Gly Thr Cys Gly Gly Gly Gly Cys Cys Gly Cys Cys
563     3490              3495              3500
564 Thr Thr Cys Cys Ala Gly Ala Thr Cys Ala Gly Gly Ala Gly Cys Thr
565 3505              3510              3515              3520
566 Gly Ala Thr Ala Cys Cys Ala Gly Cys Ala Thr Gly Cys Cys Cys Cys
567        3525              3530              3535
568 Ala Gly Gly Gly Ala Thr Ala Thr Thr Cys Cys Thr Thr Thr Cys Thr
569        3540              3545              3550
570 Ala Gly Gly Gly Ala Ala Cys Ala Gly Ala Ala Thr Gly Ala Thr Gly
571        3555              3560              3565
572 Cys Cys Cys Thr Gly Gly Cys Thr Gly Cys Thr Gly Cys Thr Thr Thr
573     3570              3575              3580
574 Cys Cys Thr Thr Cys Thr Cys Cys Gly Gly Ala Ala Gly Ala Thr Gly
575 3585              3590              3595              3600
576 Ala Cys Cys Cys Ala Cys Cys Ala Gly Ala Gly Cys Thr Cys Cys Ala
577        3605              3610              3615
578 Gly Gly Gly Cys Cys Cys Ala Ala Gly Gly Thr Cys Ala Gly Thr Cys
579        3620              3625              3630
580 Cys Ala Cys Gly Gly Gly Gly Cys Thr Cys Ala Gly Gly Thr Cys Thr
581        3635              3640              3645
582 Cys Cys Cys Ala Cys Ala Cys Cys Cys Cys Ala Gly Gly Cys Cys Thr
583     3650              3655              3660
584 Thr Thr Gly Cys Cys Ala Cys Cys Thr Cys Cys Thr Ala Gly Ala Gly
585 3665              3670              3675              3680
586 Ala Gly Gly Thr Ala Ala Gly Gly Gly Cys Ala Gly Gly Ala Cys Cys
587        3685              3690              3695
588 Cys Ala Gly Gly Cys Ala Gly Thr Gly Ala Thr Cys Ala Cys Cys Ala
589        3700              3705              3710
590 Ala Ala Gly Gly Gly Ala Ala Gly Gly Gly Gly Gly Cys Thr Thr Gly
591        3715              3720              3725
592 Gly Thr Cys Ala Thr Gly Gly Thr Cys Ala Thr Ala Gly Thr Gly Ala
593     3730              3735              3740
594 Thr Gly Gly Thr Gly Ala Thr Gly Gly Cys Ala Cys Thr Ala Gly Cys
595 3745              3750              3755              3760
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596 Thr Gly Ala Cys Ala Cys Thr Thr Ala Thr Cys Ala Gly Ala Ala Gly
597             3765                3770                3775
598 Cys Thr Ala Thr Gly Gly Gly Cys Cys Thr Gly Gly Cys Cys Cys Thr
599      ·3780                3785                3790
600 Gly Thr Thr Cys Thr Thr Ala Gly Ala Gly Cys Thr Thr Gly Gly Cys
601         3795                3800                3805
602 Ala Thr Gly Thr Ala Gly Thr Thr Thr Thr Thr Thr Thr Thr Gly Ala
603      3810                3815                3820
604 Ala Ala Cys Ala Gly Ala Gly Thr Cys Thr Cys Gly Cys Thr Cys Thr
605 3825                3830                3835                3840
606 Gly Thr Cys Ala Cys Cys Cys Ala Gly Gly Cys Thr Gly Gly Ala Gly
607             3845                3850                3855
608 Thr Gly Cys Ala Gly Thr Gly Gly Cys Gly Cys Gly Ala Thr Cys Thr
609             3860                3865                3870
610 Cys Gly Gly Cys Thr Cys Ala Cys Thr Gly Cys Ala Ala Cys Cys Thr
611         3875                3880                3885
612 Cys Thr Gly Cys Cys Thr Cys Cys Cys Gly Gly Gly Thr Thr Cys Ala
613      3890                3895                3900
614 Ala Gly Cys Gly Ala Thr Thr Cys Thr Cys Cys Thr Gly Cys Cys Thr
615 3905                3910                3915                3920
616 Cys Ala Gly Thr Cys Cys Cys Cys Cys Ala Ala Gly Thr Ala Gly Cys
617             3925                3930                3935
618 Thr Gly Gly Gly Ala Cys Thr Ala Cys Ala Gly Gly Cys Ala Cys Gly
619             3940                3945                3950
620 Thr Gly Cys Cys Ala Cys Cys Ala Thr Gly Cys Cys Cys Gly Gly Cys
621         3955                3960                3965
622 Thr Ala Ala Thr Thr Thr Thr Thr Thr Gly Thr Ala Thr Thr Thr Thr
623      3970                3975                3980
624 Thr Ala Cys Thr Ala Gly Ala Gly Ala Cys Gly Gly Gly Ala Thr Thr
625 3985                3990                3995                4000
626 Thr Cys Ala Cys Cys Ala Thr Gly Thr Thr Ala Gly Cys Cys Ala Gly
627             4005                4010                4015
628 Gly Ala Thr Gly Gly Thr Cys Thr Cys Gly Ala Thr Cys Thr Cys Cys
629             4020                4025                4030
630 Thr Gly Ala Cys Cys Thr Cys Gly Thr Gly Ala Thr Cys Thr Gly Cys
631 .        4035                4040                4045
632 Cys Thr Ala Cys Cys Thr Cys Ala Gly Cys Cys Thr Cys Cys Cys Ala
633      4050                4055          ·  4060
634 Ala Ala Gly Thr Gly Cys Thr Gly Ala Gly Ala Thr Thr Ala Cys Ala
635 4065                4070                4075                4080
636 Gly Gly Cys Gly Thr Cys Ala Gly Cys Cys Ala Cys Cys Gly Cys Gly
637             4085                4090                4095
638 Gly Cys Cys Ala Gly Cys Cys Ala Gly Cys Ala Thr Gly Thr Ala Gly
639             4100     .          4105                4110
640 Thr Thr Ala Thr Thr Thr Ala Ala Cys Cys Cys Thr Cys Ala Cys Ala
641         4115                4120                4125
642 Gly Thr Ala Ala Ala Thr Ala Gly Thr Thr Ala Thr Thr Cys Ala Thr
643      4130                4135                4140
644 Thr Cys Cys Cys Thr Thr Thr Thr Thr Ala Cys Ala Gly Gly Thr Gly
```

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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645 4145                4150                4155                4160
646 Gly Gly Gly Ala Ala Ala Cys Thr Gly Ala Ala Gly Cys Cys Cys Ala
647                4165                4170                4175
648 Gly Ala Gly Ala Gly Gly Thr Thr Ala Ala Gly Thr Ala Ala Cys Thr
649                4180                4185                4190
650 Cys Ala Cys Thr Cys Cys Ala Gly Thr Gly Gly Thr Ala Gly Cys Ala
651           4195                4200                4205
652 Cys Ala Gly Cys Thr Cys Gly Thr Ala Ala Ala Gly Gly Cys Ala Gly
653      4210                4215                4220
654 Thr Cys Thr Gly Cys Thr Thr Thr Thr Gly Thr Gly Cys Thr Thr Thr
655 4225                4230                4235                4240
656 Cys Ala Gly Ala Cys Ala Ala Ala Gly Cys Cys Ala Thr Ala Cys Cys
657                4245                4250                4255
658 Ala Cys Ala Gly Cys Cys Thr Cys Thr Cys Ala Gly Cys Cys Cys Thr
659           4260                4265                4270
660 Gly Cys Thr Gly Gly Gly Ala Ala Gly Gly Gly Thr Gly Ala Gly Gly
661      4275                4280                4285
662 Ala Gly Gly Gly Ala Cys Ala Gly Gly Gly Ala Gly Gly Thr Thr Gly
663      4290                4295                4300
664 Gly Gly Gly Gly Gly Ala Ala Gly Ala Ala Gly Gly Gly Gly Thr Gly
665 4305                4310                4315                4320
666 Ala Gly Thr Gly Gly Ala Gly Cys Thr Gly Ala Gly Gly Gly Gly Cys
667                4325                4330                4335
668 Thr Gly Thr Gly Cys Cys Cys Thr Thr Gly Thr Thr Thr Ala Cys Ala
669           4340                4345                4350
670 Cys Thr Gly Cys Ala Thr Thr Ala Gly Cys Ala Thr Gly Gly Thr Ala
671           4355                4360                4365
672 Gly Cys Thr Ala Ala Gly Ala Gly Gly Ala Cys Ala Ala Gly Cys Cys
673      4370                4375                4380
674 Cys Gly Gly Gly Ala Cys Cys Cys Ala Gly Cys Ala Cys Cys Thr Gly
675 4385                4390                4395                4400
676 Gly Gly Thr Gly Thr Gly Ala Gly Cys Cys Cys Thr Gly Gly Thr Thr
677           4405                4410                4415
678 Cys Cys Gly Cys Thr Gly Cys Thr Thr Cys Cys Thr Gly Gly Cys Thr
679           4420                4425                4430
680 Thr Thr Gly Thr Ala Cys Cys Thr Cys Gly Ala Gly Gly Cys Ala Ala
681      4435                4440                4445
682 Gly Gly Gly Ala Thr Thr Thr Thr Ala Thr Cys Thr Cys Cys'Thr Thr
683      4450                4455                4460
684 Gly Thr Gly Thr Cys Thr Cys Ala Gly Cys Ala Cys Thr Cys Thr Cys
685 4465                4470                4475                4480
686 Ala Thr Cys Thr Gly Thr Ala Ala Gly Ala Cys Thr Gly Cys Ala Cys
687           4485                4490                4495
688 Cys Ala Cys Ala Thr Cys Ala Ala Cys Ala Cys Thr Cys Ala Thr Cys
689           4500                4505                4510
690 Cys Thr Ala Ala Ala Gly Gly Gly Ala Cys Thr Gly Thr Gly Ala Gly
691           4515                4520                4525
692 Ala Cys Thr Thr Ala Ala Ala Thr Gly Ala Ala Thr Gly Ala Ala Thr
693      4530                4535                4540
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Input Set : **A:\Seqlist.txt**
Output Set: **N:\CRF3\05172001\I778963.raw**

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694 Ala Thr Ala Thr Gly Thr Ala Ala Gly Gly Cys Gly Cys Thr Thr Gly
695 4545              4550              4555              4560
696 Gly Thr Gly Ala Gly Cys Ala Gly Ala Thr Ala Gly Thr Ala Ala Ala
697              4565              4570              4575
698 Thr Gly Cys Ala Cys Ala Ala Thr Ala Ala Ala Thr Cys Cys Cys Cys
699              4580              4585              4590
700 Ala Ala Gly Thr Cys Thr Thr Cys Thr Gly Thr Thr Gly Ala Gly Thr
701      4595              4600              4605
702 Cys Ala Gly Cys Ala Thr Thr Thr Gly Cys Ala Ala Gly Thr Gly Gly
703      4610              4615              4620
704 Gly Cys Cys Thr Gly Cys Thr Ala Cys Gly Gly Gly Thr Thr Ala Cys
705 4625              4630              4635              4640
706 Ala Cys Gly Ala Thr Cys Ala Thr Thr Thr Cys Cys Cys Ala Ala Gly
707              4645              4650              4655
708 Thr Cys Ala Cys Gly Cys Cys Cys Cys Thr Gly Ala Ala Gly Thr Thr
709              4660              4665              4670
710 Gly Cys Thr Gly Ala Gly Cys Ala Gly Gly Gly Ala Thr Ala Ala Gly
711      4675              4680              4685
712 Gly Gly Ala Ala Gly Gly Ala Gly Thr Gly Ala Gly Cys Ala Gly Gly
713      4690              4695              4700
714 Cys Ala Ala Cys Thr Cys Thr Cys Thr Ala Gly Gly Cys Ala Thr Cys
715 4705              4710              4715              4720
716 Ala Thr Thr Cys Ala Gly Ala Thr Ala Ala Cys Cys Cys Cys Cys Cys
717              4725              4730              4735
718 Ala Ala Cys Thr Gly Ala Gly Gly Thr Ala Cys Thr Thr Cys Thr Ala
719              4740              4745              4750
720 Thr Ala Cys Ala Gly Ala Gly Ala Ala Ala Cys Cys Cys Ala Thr Gly
721      4755              4760              4765
722 Cys Cys Ala Cys Thr Cys Cys Cys Ala Gly Cys Cys Cys Thr Gly Cys
723      4770              4775              4780
724 Thr Gly Cys Cys Gly Cys Cys Thr Thr Gly Ala Gly Gly Cys Cys Ala
725 4785              4790              4795              4800
726 Ala Gly Ala Cys Thr Gly Ala Gly Gly Cys Thr Gly Cys Gly Gly Gly
727              4805              4810              4815
728 Gly Thr Gly Gly Cys Cys Cys Cys Thr Cys Cys Thr Thr Gly Ala Gly
729              4820              4825              4830
730 Thr Gly Cys Thr Thr Thr Cys Thr Cys Thr Thr Cys Cys Ala Gly Gly
731      4835              4840              4845
732 Cys Thr Gly Gly Cys Thr Thr Thr Cys Cys Gly Ala Gly Cys Ala
733      4850              4855              4860
734 Thr Cys Thr Gly Ala Cys Cys Cys Ala Gly Ala Cys Ala Gly Cys Ala
735 4865              4870              4875              4880
736 Gly Thr Cys Ala Ala Gly Thr Thr Cys Thr Cys Cys Gly Cys Thr Cys
737              4885              4890              4895
738 Cys Ala Cys Cys Cys Cys Gly Ala Gly Thr Thr Thr Thr Gly Gly Ala
739              4900              4905              4910
740 Gly Ala Ala Gly Gly Gly Gly Cys Ala Thr Gly Thr Ala Gly Ala Thr
741      4915              4920              4925
742 Ala Gly Gly Ala Gly Ala Gly Cys Cys Cys Thr Gly Gly Gly Thr Cys
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743      4930             .4935              4940
744 Gly Ala Cys Cys Thr Gly Thr Gly Thr Thr Cys Gly Ala Ala Thr Cys
745 4945             4950             4955             4960
746 Cys Thr Thr Gly Cys Thr Gly Gly Gly Cys Cys Thr Cys Thr Thr Gly
747             4965             4970             4975
748 Gly Cys Thr Thr Ala Ala Ala Thr Gly Thr Gly Thr Gly Ala Cys Cys
749             4980             4985             4990
750 Ala Gly Ala Gly Gly Cys Ala Cys Ala Thr Gly Cys Ala Thr Cys Cys
751         4995             5000             5005
752 Thr Gly Thr Cys Thr Gly Ala Gly Thr Cys Thr Cys Ala Gly Cys Cys
753     5010             5015             5020
754 Thr Cys Cys Cys Cys Ala Gly Cys Cys Ala Cys Ala Cys Ala Gly Thr
755 5025             5030             5035             5040
756 Gly Gly Gly Cys Thr Thr Ala Ala Cys Cys Thr Cys Ala Thr Ala Cys
757             5045             5050             5055
758 Cys Cys Cys Gly Cys Ala Gly Gly Gly Ala Gly Gly Cys Thr Gly Thr
759         5060             5065             5070
760 Gly Ala Gly Gly Ala Cys Thr Gly Cys Ala Ala Gly Ala Ala Gly Gly
761         5075             5080             5085
762 Cys Thr Thr Gly Thr Gly Gly Cys Gly Gly Gly Ala Gly Cys Thr Thr
763     5090             5095             5100
764 Cys Cys Ala Gly Cys Ala Cys Gly Thr Gly Ala Cys Gly Gly Gly Thr
765 5105             5110             5115             5120
766 Ala Thr Thr Gly Cys Ala Thr Thr Gly Gly Thr Gly Thr Cys Ala Gly
767             5125             5130             5135
768 Cys Thr Cys Cys Cys Cys Cys Ala Gly Cys Cys Thr Thr Gly Gly Gly
769         5140             5145             5150
770 Gly Ala Gly Gly Gly Gly Ala Cys Thr Gly Gly Gly Thr Ala Cys Cys
771         5155             5160             5165
772 Cys Gly Cys Thr Gly Cys Ala Ala Thr Gly Ala Ala Thr Ala Ala Gly
773     5170             5175             5180
774 Gly Cys Thr Ala Ala Thr Gly Ala Cys Ala Gly Ala Gly Gly Gly Ala
775 5185             5190             5195             5200
776 Ala Gly Gly Ala Gly Ala Gly Gly Gly Gly Ala Gly Ala Thr Gly Thr
777         ·5205             5210             5215
778 Ala Gly Ala Gly Ala Gly Gly Ala Ala Gly Cys Ala Cys Ala Thr Gly
779         5220             5225             5230
780 Cys Ala Thr Ala Thr Thr Thr Thr Cys Ala Gly Cys Ala Thr Thr Ala
781     5235             5240             5245
782 Ala Thr Thr Thr Thr Cys Ala Gly Thr Gly Ala Cys Ala Cys Ala Ala
783     5250             5255             5260
784 Gly Thr Ala Ala Thr Ala Cys Cys Cys Ala Ala Ala Cys Ala Cys Ala
785 5265             5270             5275             5280
786 Cys Cys Cys Thr Cys Cys Thr Gly Cys Ala Ala Ala Cys Gly Cys Thr
787         5285             5290             5295
788 Ala Cys Ala Gly Ala Thr Ala Ala Ala Gly Cys Thr Ala Ala Thr Gly
789         5300             5305             5310
790 Cys Cys Cys Cys Thr Thr Thr Gly Ala Cys Cys Cys Ala Thr Gly Thr
791         5315             5320             5325
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792 Cys Cys Cys Cys Ala Ala Thr Cys Cys Cys Ala Gly Gly Cys Thr Cys
793     5330                5335                5340
794 Cys Thr Gly Cys Cys Cys Cys Thr Gly Cys Cys Cys Cys Gly Gly Ala
795 5345                5350                5355                5360
796 Gly Gly Thr Gly Gly Cys Cys Ala Cys Cys Cys Thr Gly Gly Cys Ala
797             5365                5370                5375
798 Gly Thr Cys Thr Gly Gly Cys Ala Thr Gly Gly Ala Gly Cys Cys Thr
799             5380                5385                5390
800 Thr Cys Cys Gly Gly Gly Cys Cys Thr Cys Cys Gly Thr Gly Ala Cys
801         5395                5400                5405
802 Thr Ala Cys Ala Cys Cys Gly Gly Cys Ala Thr Thr Cys Gly Thr Ala
803         5410                5415                5420
804 Thr Thr Thr Gly Thr Ala Thr Cys Cys Cys Cys Ala Cys Ala Ala Thr
805 5425                5430                5435                5440
806 Gly Gly Ala Gly Ala Gly Thr Ala Thr Thr Thr Thr Thr Gly Thr Cys
807             5445                5450                5455
808 Thr Gly Thr Cys Thr Cys Thr Thr Thr Thr Thr Thr Ala Thr Gly Gly
809             5460                5465                5470
810 Cys Gly Cys Ala Thr Ala Thr Cys Ala Thr Thr Cys Thr Gly Ala Gly
811         5475                5480                5485
812 Cys Ala Cys Ala Gly Cys Thr Gly Thr Cys Thr Gly Ala Thr Gly Cys
813         5490                5495                5500
814 Thr Thr Gly Thr Thr Thr Thr Thr Thr Thr Thr Thr Cys Ala Cys Ala
815 5505                5510                5515                5520
816 Cys Ala Cys Cys Ala Ala Cys Cys Cys Gly Thr Gly Cys Cys Thr Cys
817             5525                5530                5535
818 Ala Thr Thr Thr Thr Cys Cys Ala Ala Cys Cys Thr Gly Gly Thr Gly
819             5540                5545                5550
820 Gly Ala Ala Cys Cys Thr Cys Ala Thr Thr Thr Thr Thr Cys Ala
821         5555                5560                5565
822 Ala Cys Cys Thr Cys Ala Thr Thr Thr Thr Cys Cys Thr Gly Cys Thr
823     5570                5575                5580
824 Gly Cys Thr Cys Ala Gly Gly Ala Ala Ala Thr Thr Cys Thr Gly Ala
825 5585                5590                5595                5600
826 Ala Ala Gly Cys Cys Ala Thr Thr Ala Ala Thr Thr Cys Cys Ala Cys
827             5605                5610                5615
828 Thr Gly Cys Cys Ala Gly Cys Thr Cys Thr Thr Cys Thr Thr Cys Cys
829         5620                5625                5630
830 Ala Gly Cys Thr Gly Cys Cys Ala Gly Ala Cys Gly Gly Gly Cys Cys
831         5635                5640                5645
832 Gly Ala Thr Cys Thr Cys Thr Gly Ala Thr Gly Cys Thr Thr Gly Gly
833     5650                5655                5660
834 Cys Ala Thr Cys Gly Cys Ala Gly Thr Cys Thr Cys Gly Cys Ala Thr
835 5665                5670                5675                5680
836 Thr Thr Gly Ala Ala Thr Ala Thr Gly Thr Cys Ala Ala Gly Gly Cys
837             5685                5690                5695
838 Cys Ala Cys Gly Ala Gly Thr Cys Cys Thr Cys Ala Gly Gly Gly Gly
839         5700                5705                5710
840 Cys Cys Cys Cys Gly Gly Ala Thr Thr Ala Gly Cys Cys Thr Ala Ala
```

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841        5715               5720               5725
842 Cys Gly Gly Gly Ala Thr Gly Gly Gly Gly Thr Thr Thr Gly Gly Cys
843      5730               5735               5740
844 Ala Gly Cys Cys Cys Ala Ala Gly Cys Ala Gly Gly Ala Ala Gly Ala
845 5745               5750               5755               5760
846 Gly Thr Thr Gly Cys Cys Ala Ala Gly Cys Thr Gly Ala Cys Gly Cys
847              5765               5770               5775
848 Thr Gly Cys Cys Thr Cys Gly Cys Ala Ala Gly Thr Gly Cys Cys Thr
849        .    5780               5785               5790
850 Thr Thr Cys Ala Gly Ala Ala Gly Ala Gly Cys Cys Cys Ala Cys Ala
851           5795               5800               5805      .
852 Cys Thr Gly Cys Ala Gly Thr Thr Cys Cys Cys Thr Cys Cys Ala Thr
853      5810               5815               5820
854 Cys Ala Cys Cys Thr Cys Cys Cys Ala Thr Cys Cys Ala Thr Thr Cys
855 5825               5830               5835               5840
856 Ala Gly Gly Cys Thr Thr Cys Cys Thr Thr Gly Gly Thr Thr Ala Ala
857              5845               5850               5855
858 Cys Ala Cys Thr Gly Ala Cys Thr Gly Thr Gly Thr Gly Cys Cys Ala
859              5860               5865  .            5870
860 Gly Gly Cys Cys Cys Thr Gly Gly Gly Gly Ala Gly Ala Cys Cys Ala
861        5875               5880               5885  .
862 Gly Gly Ala Cys Gly Ala Gly Thr Gly Gly Gly Thr Gly Ala Thr Gly
863      5890               5895               5900
864 Gly Ala Ala Cys Cys Cys Thr Thr Cys Thr Cys Thr Gly Thr Gly Cys
865 5905               5910               5915      .        5920
866 Cys Cys Gly Ala Gly Cys Thr Gly Thr Thr Thr Gly Gly Ala Gly Cys
867              5925               5930               5935
868 Ala Cys Ala Cys Cys Thr Thr Thr Gly Ala Thr Cys Thr Gly Gly Ala
869              5940               5945               5950
870 Cys Ala Cys Cys Ala Thr Thr Cys Thr Gly Ala Ala Thr Gly Thr Gly
871        5955               5960               5965
872 Cys Cys Ala Thr Gly Thr Gly Cys Cys Ala Thr Thr Ala Ala Ala Thr
873      5970               5975  .            5980
874 Gly Gly Gly Gly Gly Thr Ala Ala Ala Thr Gly Ala Thr Gly Thr Gly
875 5985               5990               5995               6000
876 Cys Thr Cys Thr Gly Gly Gly Gly Gly Thr Gly Cys Ala Gly Ala Gly
877              6005               6010               6015
878 Gly Ala Ala Gly Gly Thr Gly Gly Cys Ala Gly Cys Cys Ala Thr Thr
879              6020               6025               6030
880 Cys Thr Gly Cys Cys Ala Gly Ala Ala Gly Cys Thr Gly Gly Ala Ala
881        6035               6040               6045
882 Cys Thr Gly Gly Thr Thr Gly Cys Thr Thr Cys Thr Cys Thr Thr Cys
883      6050               6055               6060
884 Thr Cys Ala Ala Gly Ala Ala Thr Thr Thr Gly Gly Gly Cys Cys Ala
885 6065               6070               6075               6080
886 Ala Thr Thr Gly Cys Thr Gly Ala Thr Thr Cys Cys Thr Cys Thr Gly
887              6085               6090      .        6095
888 Gly Gly Cys Cys Thr Cys Ala Gly Thr Thr Thr Cys Cys Thr Cys Ala
889              6100               6105               6110
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890 Thr Cys Thr Gly Thr Gly Ala Gly Ala Cys Ala Gly Gly Gly Ala Thr
891         6115            6120            6125
892 Cys Thr Thr Gly Thr Cys Ala Cys Ala Cys Cys Ala Cys Ala Ala Gly
893     6130            6135            6140
894 Gly Cys Thr Ala Thr Cys Ala Ala Gly Ala Gly Thr Thr Thr Gly Ala
895 6145            6150            6155            6160
896 Gly Cys Ala Ala Ala Ala Gly Thr Gly Gly Thr Thr Gly Gly Ala Cys
897             6165            6170            6175
898 Gly Cys Ala Gly Thr Gly Gly Cys Thr Cys Ala Thr Gly Cys Cys Thr
899             6180            6185            6190
900 Gly Thr Ala Ala Thr Cys Cys Cys Ala Gly Cys Thr Cys Thr Thr Thr
901         6195            6200            6205
902 Gly Gly Gly Ala Gly Gly Cys Cys Gly Ala Gly Gly Thr Gly Gly Gly
903     6210            6215            6220
904 Cys Ala Gly Ala Thr Cys Thr Cys Thr Thr Gly Ala Gly Gly Thr Cys
905 6225            6230            6235            6240
906 Ala Gly Gly Ala Gly Thr Thr Cys Ala Ala Gly Ala Cys Cys Ala Gly
907             6245            6250            6255
908 Cys Cys Thr Gly Gly Cys Thr Ala Ala Cys Ala Cys Ala Gly Thr Gly
909             6260            6265            6270
910 Ala Ala Ala Cys Ala Cys Cys Gly Thr Cys Thr Cys Thr Ala Cys Thr
911         6275            6280            6285
912 Ala Ala Ala Ala Ala Ala Thr Ala Cys Ala Ala Ala Ala Ala Ala Thr
913     6290            6295            6300
914 Thr Ala Gly Cys Cys Ala Gly Gly Thr Gly Thr Gly Gly Thr Gly Ala
915 6305            6310            6315            6320
916 Thr Gly Gly Gly Cys Ala Cys Cys Thr Gly Thr Ala Ala Thr Cys Cys
917             6325            6330            6335
918 Cys Ala Gly Thr Thr Ala Cys Thr Cys Gly Gly Gly Ala Gly Gly Cys
919             6340            6345            6350
920 Thr Gly Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Ala Thr Cys Thr
921         6355            6360            6365
922 Cys Thr Thr Gly Ala Ala Cys Cys Cys Ala Gly Gly Ala Gly Gly Thr
923     6370            6375            6380
924 Gly Gly Ala Gly Gly Thr Thr Gly Cys Ala Gly Thr Gly Ala Gly Cys
925 6385            6390            6395            6400
926 Thr Gly Ala Gly Ala Thr Cys Thr Thr Gly Cys Cys Ala Thr Thr Gly
927             6405            6410            6415
928 Cys Ala Thr Thr Cys Cys Ala Gly Gly Cys Thr Gly Gly Gly Cys Ala
929             6420         .   6425            6430
930 Ala Cys Ala Ala Gly Ala Gly Thr Gly Ala Ala Ala Cys Thr Cys Thr
931         6435            6440            6445
932 Gly Thr Cys Thr Cys Ala Gly Ala Ala Ala Ala Thr Ala Ala Ala Thr
933     6450            6455            6460
934 Ala Ala Ala Thr Ala Ala Ala Thr Ala Ala Ala Thr Ala Ala Ala Ala
935 6465            6470            6475            6480
936 Ala Ala Thr Ala Gly Cys Thr Ala Gly Gly Cys Ala Thr Gly Gly Thr
937             6485            6490            6495
938 Gly Ala Cys Ala Gly Gly Cys Gly Cys Cys Thr Gly Thr Ala Ala Thr
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939           6500              6505              6510
940 Cys Cys Cys Ala Gly Cys Thr Gly Cys Thr Cys Cys Ala Gly Ala Gly
941           6515              6520              6525
942 Gly Cys Thr Gly Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Ala Thr
943      6530              6535    .          6540
944 Cys Gly Cys Thr Thr Ala Ala Ala Cys Cys Cys Ala Gly Gly Ala Gly
945 6545              6550              6555              6560
946 Gly Thr Gly Gly Ala Ala Gly Thr Thr Gly Cys Ala Gly Thr Gly Ala
947              6565              6570              6575
948 Gly Cys Cys Ala Ala Gly Ala Thr Cys Ala Cys Ala Cys Cys Ala Cys
949           6580              6585              6590
950 Thr Gly Cys Ala Cys Thr Cys Cys Ala Gly Cys Cys Thr Gly Gly Gly
951           6595              6600              6605
952 Cys Cys Ala Cys Ala Gly Ala Gly Ala Ala Ala Gly Ala Cys Thr Cys
953      6610              6615              6620
954 Cys Ala Thr Cys Thr Cys Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala
955 6625              6630              6635              6640
956 Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly
957           6645              6650              6655
958 Thr Thr Thr Ala Ala Gly Cys Ala Ala Ala Ala Gly Thr Gly Ala Gly
959           6660              6665              6670
960 Gly Ala Ala Gly Gly Thr Gly Cys Thr Thr Ala Thr Thr Ala Ala Ala
961           6675              6680              6685
962 Ala Gly Cys Thr Gly Gly Ala Ala Ala Thr Cys Ala Gly Gly Ala Thr
963      6690              6695              6700
964 Gly Gly Ala Gly Gly Thr Ala Cys Cys Ala Gly Thr Cys Cys Ala Gly
965 6705              6710              6715              6720
966 Ala Cys Ala Gly Cys Cys Thr Cys Cys Cys Cys Ala Cys Cys Ala Cys
967              6725              6730              6735
968 Cys Cys Cys Ala Cys Cys Gly Thr Cys Thr Cys Cys Ala Cys Ala Gly
969           6740              6745              6750
970 Cys Ala Gly Cys Cys Cys Cys Thr Gly Thr Thr Thr Cys Ala Gly Ala
971           6755              6760              6765
972 Thr Thr Cys Ala Cys Ala Ala Gly Cys Cys Thr Gly Cys Cys Thr Thr
973      6770              6775              6780
974 Gly Ala Gly Thr Gly Ala Thr Gly Cys Ala Gly Thr Gly Ala Gly Thr
975 6785              6790              6795              6800
976 Thr Ala Thr Cys Cys Thr Gly Gly Ala Gly Gly Cys Ala Gly Thr Gly
977              6805              6810              6815
978 Thr Gly Gly Gly Cys Cys Thr Thr Gly Gly Ala Gly Gly Cys Cys Ala
979           6820              6825              6830
980 Gly Cys Ala Cys Thr Cys Ala Cys Thr Thr Thr Thr Cys Ala Thr
981           6835              6840              6845
982 Cys Cys Thr Ala Thr Gly Ala Thr Thr Thr Ala Thr Thr Thr Gly Ala
983      6850              6855              6860
984 Gly Ala Ala Gly Cys Ala Gly Ala Gly Ala Gly Cys Ala Cys Cys Thr
985 6865              6870              6875              6880
986 Ala Cys Cys Gly Gly Gly Thr Gly Cys Cys Ala Gly Gly Ala Ala Cys
987           6885              6890              6895
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Input Set : **A:\Seqlist.txt**
Output Set: **N:\CRF3\05172001\I778963.raw**

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 988 Gly Ala Gly Cys Thr Ala Gly Gly Thr Gly Ala Gly Ala Ala Cys Ala
 989         6900                6905                6910
 990 Gly Ala Ala Thr Cys Ala Gly Gly Thr Ala Gly Ala Ala Ala Thr Cys
 991         6915                6920                6925
 992 Thr Cys Ala Gly Cys Cys Thr Ala Gly Cys Cys Ala Cys Ala Cys Gly
 993     6930                6935                6940
 994 Gly Ala Ala Gly Cys Thr Gly Thr Gly Thr Gly Ala Thr Cys Thr Thr
 995 6945                6950                6955                6960
 996 Gly Gly Gly Cys Ala Gly Gly Cys Thr Gly Cys Ala Thr Ala Cys Cys
 997         6965                6970                6975
 998 Cys Thr Thr Thr Cys Thr Gly Ala Gly Cys Cys Thr Cys Ala Gly Thr
 999         6980                6985                6990
1000 Thr Thr Gly Cys Thr Cys Ala Cys Cys Thr Gly Thr Ala Ala Thr Gly
1001         6995                7000                7005
1002 Cys Ala Ala Ala Gly Gly Thr Ala Ala Cys Ala Ala Ala Ala Thr Cys
1003     7010                7015                7020
1004 Thr Thr Gly Ala Cys Ala Gly Ala Gly Gly Cys Ala Thr Ala Gly Thr
1005 7025                7030                7035                7040
1006 Gly Ala Gly Gly Ala Ala Thr Cys Ala Ala Gly Ala Gly Ala Ala Cys
1007             7045                7050                7055
1008 Ala Ala Cys Gly Gly Gly Cys Cys Thr Gly Gly Ala Gly Cys Ala Thr
1009         7060                7065                7070
1010 Ala Cys Ala Cys Cys Cys Ala Gly Thr Gly Cys Thr Thr Ala Gly Cys
1011         7075                7080                7085
1012 Cys Cys Cys Cys Ala Gly Thr Ala Gly Gly Cys Cys Cys Thr Cys Ala
1013     7090                7095          .         7100
1014 Cys Thr Cys Thr Cys Ala Thr Cys Ala Thr Thr Ala Cys Thr Gly Ala
1015 7105                7110                7115                7120
1016 Cys Ala Cys Cys Thr Gly Ala Gly Gly Thr Cys Ala Cys Thr Gly Ala
1017             7125                7130                7135
1018 Gly Cys Ala Thr Gly Thr Gly Cys Cys Ala Cys Thr Gly Thr Cys Cys
1019         7140                7145                7150
1020 Ala Thr Thr Cys Ala Thr Thr Ala Thr Cys Thr Thr Gly Cys Ala Thr
1021         7155                7160          .       7165
1022 Ala Ala Cys Thr Cys Cys Cys Ala Ala Ala Ala Thr Cys Ala Thr Cys
1023     7170                7175                7180
1024 Cys Thr Gly Cys Ala Ala Gly Gly Thr Ala Ala Thr Ala Thr Thr Thr
1025 7185                7190                7195                7200
1026 Cys Ala Thr Cys Thr Thr Cys Ala Thr Gly Ala Ala Ala Cys Ala Gly
1027             7205                7210                7215
1028 Ala Cys Ala Gly Ala Gly Ala Ala Ala Cys Thr Gly Ala Gly Gly Thr
1029         7220          .         7225                7230
1030 Thr Ala Cys Ala Gly Ala Gly Gly Thr Thr Thr Cys Gly Thr Gly Ala
1031         7235                7240                7245
1032 Thr Cys Thr Gly Cys Cys Cys Ala Ala Gly Thr Cys Thr Gly Cys Thr
1033     7250                7255                7260
1034 Gly Gly Cys Ala Gly Cys Thr Ala Ala Gly Cys Gly Gly Ala Thr Gly
1035 7265   .                7270                7275                7280
1036 Ala Gly Gly Cys Cys Ala Gly Ala Thr Gly Cys Ala Ala Ala Cys Thr
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1037                7285              7290              7295
1038 Ala Gly Gly Cys Ala Thr Thr Gly Ala Gly Cys Ala Ala Gly Ala Cys
1039·           7300              7305              7310
1040 Ala Gly Gly Cys Ala Gly Gly Ala Cys Cys Cys Cys Thr Gly Cys Thr
1041      7315              7320              7325
1042 Cys Thr Cys Ala Thr Ala Gly Ala Ala Ala Thr Gly Ala Thr Thr Thr
1043     7330              7335              7340
1044 Thr Thr Ala Thr Thr Ala Thr Thr Ala Thr Cys Thr Gly Ala Ala Cys
1045 7345              7350              · 7355              7360
1046 Ala Cys Ala Gly Thr Cys Cys Ala Cys Ala Cys Ala Ala Gly Thr Gly
1047           7365              7370              7375
1048 Ala Cys Cys Thr Ala Cys Cys Cys Cys Thr Cys Thr Cys Cys Ala Gly
1049           7380              7385              7390
1050 Cys Cys Cys Thr Gly Cys Ala Ala Ala Gly Ala Ala Ala Thr Gly Thr
1051           7395              7400              7405
1052 Gly Ala Ala Gly Thr Gly Ala Gly Thr Thr Ala Ala Cys Thr Gly Thr
1053     7410              7415              7420
1054 Ala Thr Thr Thr Gly Ala ·Ala Cys Cys Ala Ala Gly Thr Gly Gly Thr
1055 7425              7430              7435              7440
1056 Cys Cys Ala Cys Gly Thr Gly Thr Thr Ala Gly Cys Thr Ala Thr Gly
1057           7445              7450              7455
1058 Cys Gly Ala Cys Thr Gly Thr Gly Ala Ala Cys Ala Gly Gly Gly Gly
1059           7460              7465              7470·
1060 Cys Thr Thr Cys Ala Ala Cys Cys Cys Cys Thr Cys Ala Gly Cys
1061           7475              7480              7485
1062 Cys Thr Cys Ala Gly Thr Thr Thr Cys Cys Thr Gly Thr Cys Cys Thr
1063     7490              7495              7500
1064 Gly Gly Ala Ala Ala Ala Thr Ala Ala Thr Cys Gly Cys Ala Gly Gly
1065 7505              7510              7515              7520
1066 Gly Ala Gly Ala Ala Thr Ala Ala Thr Cys Gly Cys Ala Gly Cys Thr
1067           7525              7530              7535
1068 Ala Cys Cys Cys Cys Gly Ala Ala Gly Ala Gly Thr Cys Gly Cys Thr
1069           7540              7545              7550
1070 Gly Thr Gly Thr Ala Gly Gly Thr Thr Ala Ala Ala Gly Cys Ala Gly
1071           7555              7560              7565
1072 Thr Thr Ala Thr Gly Cys Cys Gly Cys Ala Thr Ala Ala Cys Thr Gly
1073     7570              7575              7580
1074 Cys Thr Thr Cys Ala Gly Gly Gly Cys Ala Cys Cys Thr Gly Thr Gly
1075 7585              7590              7595              7600
1076 Ala Cys Thr Cys Cys Cys Ala Gly Cys Thr Cys Thr Thr Ala Gly Gly
·1077           7605              7610              7615
1078 Gly Cys Thr Gly Ala Thr Gly Thr Thr Cys Thr Gly Thr Gly Gly Cys
1079           7620              7625              7630
1080 Cys Ala Gly Ala Gly Gly Ala Gly Gly Gly Cys Ala Gly Gly Gly Gly
1081           7635              7640              7645
1082 Thr Thr Gly Cys Ala Gly Cys Thr Gly Gly Cys Cys Gly Gly Thr Gly
1083     7650              7655              7660
1084 Ala Ala Cys Thr Cys Ala Cys Thr Ala Cys Cys Thr Gly Gly Gly Cys
1085 7665                7670              7675              7680
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1086 Thr Cys Thr Cys Thr Cys Cys Cys Thr Gly Cys Ala Gly Gly Gly Gly
1087               7685           7690                7695
1088 Ala Thr Gly Thr Cys Thr Thr Cys Ala Thr Cys Cys Thr Gly Gly Thr
1089           7700           7705                7710
1090 Gly Thr Thr Cys Ala Gly Cys Cys Thr Gly Gly Ala Thr Ala Ala Cys
1091       7715           7720                7725
1092 Cys Gly Gly Gly Ala Gly Thr Cys Cys Thr Thr Cys Gly Ala Thr Gly
1093      7730           7735                7740
1094 Ala Gly Gly Thr Cys Ala Ala Gly Cys Gly Cys Cys Thr Thr Cys Ala
1095 7745           7750                7755                7760
1096 Gly Ala Ala Gly Cys Ala Gly Ala Thr Cys Thr Gly Gly Gly Ala Gly
1097           7765           7770                7775
1098 Gly Thr Cys Ala Ala Gly Thr Cys Cys Thr Gly Cys Cys Thr Gly Ala
1099           7780           7785                7790
1100 Ala Gly Ala Ala Cys Ala Ala Gly Ala Cys Cys Ala Ala Gly Gly Ala
1101           7795           7800                7805
1102 Gly Gly Cys Gly Gly Cys Gly Gly Ala Gly Cys Thr Gly Cys Cys Cys
1103      7810           7815                7820
1104 Ala Thr Gly Gly Thr Cys Ala Thr Cys Thr Gly Thr Gly Gly Cys Ala
1105 7825           7830                7835                7840
1106 Ala Cys Ala Ala Gly Ala Ala Cys Gly Ala Cys Cys Ala Cys Gly Gly
1107           7845           7850                7855
1108 Cys Gly Ala Gly Cys Thr Gly Thr Gly Cys Cys Gly Cys Cys Ala Gly
1109           7860           7865                7870
1110 Gly Thr Gly Cys Cys Cys Ala Cys Cys Ala Cys Cys Gly Ala Gly Gly
1111       7875           7880                7885
1112 Cys Cys Gly Ala Gly Cys Thr Gly Cys Thr Gly Gly Thr Gly Thr Cys
1113      7890           7895                7900
1114 Gly Gly Gly Cys Gly Ala Cys Gly Ala Gly Ala Ala Cys Thr Gly Cys
1115 7905           7910                7915                7920
1116 Gly Cys Cys Thr Ala Cys Thr Thr Cys Gly Ala Gly Gly Thr Gly Thr
1117           7925           7930                7935
1118 Cys Gly Gly Cys Cys Ala Ala Gly Ala Ala Gly Ala Ala Cys Ala Cys
1119           7940           7945                7950
1120 Cys Ala Ala Cys Gly Thr Gly Gly Ala Cys Gly Ala Gly Ala Thr Gly
1121           7955           7960                7965
1122 Thr Thr Cys Thr Ala Cys Gly Thr Gly Cys Thr Cys Thr Thr Cys Ala
1123      7970           7975                7980
1124 Gly Cys Ala Thr Gly Gly Cys Cys Ala Ala Gly Cys Thr Gly Cys Cys
1125 7985           7990                7995                8000
1126 Ala Cys Ala Cys Gly Ala Gly Ala Thr Gly Ala Gly Cys Cys Cys Cys
1127           8005           8010                8015
1128 Gly Cys Cys Gly Thr Gly Cys Ala Thr Cys Gly Cys Ala Ala Gly Ala
1129      8020           8025                8030
1130 Thr Cys Thr Cys Cys Gly Thr Gly Cys Ala Gly Thr Ala Cys Gly Gly
1131      8035           8040                8045
1132 Thr Gly Ala Cys Gly Cys Cys Thr Thr Cys Cys Ala Cys Cys Cys Cys
1133      8050           8055                8060
1134.Ala Gly Gly Cys Cys Cys Thr Thr Cys Thr Gly Cys Ala Thr Gly Cys
```

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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1135 8065              8070              8075              8080
1136 Gly Cys Cys Gly Cys Gly Thr Cys Ala Ala Gly Gly Ala Gly Ala Thr
1137              8085              8090              8095  .
1138 Gly Gly Ala Cys Gly Cys Cys Thr Ala Thr Gly Gly Cys Ala Thr Gly
1139         8100              8105              8110
1140 Gly Thr Cys Thr Cys Gly Cys Cys Cys Thr Thr Cys Gly Cys Cys Cys
1141         8115              8120              8125
1142 Gly Cys Cys Gly Cys Cys Cys Cys Ala Gly Cys Gly Thr Cys Ala Ala
1143    8130              8135              8140
1144 Cys Ala Gly Thr Gly Ala Cys Cys Thr Cys Ala Ala Gly Thr Ala Cys
1145 8145              8150              8155              8160
1146 Ala Thr Cys Ala Ala Gly Gly Cys Cys Ala Ala Gly Gly Thr Cys Cys
1147              8165              8170              8175
1148 Thr Thr Cys Gly Gly Gly Ala Ala Gly Gly Cys Cys Ala Gly Gly Cys
1149         8180              8185              8190
1150 Cys Cys Gly Thr Gly Ala Gly Ala Gly Gly Gly Ala Cys Ala Ala Gly
1151         8195              8200              8205
1152 Thr Gly Cys Ala Cys Cys Ala Thr Cys Cys Ala Gly Thr Gly Ala Gly
1153    8210              8215              8220
1154 Cys Gly· Ala Gly Gly Gly Ala Thr Gly Cys Thr Gly Gly Gly Gly Cys
1155 8225              8230              8235              8240
1156 Gly Gly Gly Gly Cys Thr Thr Gly Gly Cys Cys Ala Gly Thr Gly Cys
1157    .              8245              8250              8255
1158 Cys Thr Thr Cys Ala Gly Gly Gly Ala Gly Gly Thr Gly Gly Cys Cys
1159         8260              8265              8270
1160 Cys Cys Ala Gly Ala Thr Gly Cys Cys Cys Ala Cys Thr Gly Thr Gly
1161         8275              8280              8285
1162 Cys Gly Cys Ala Thr Cys Thr Cys Cys Cys Cys Ala Cys Cys Gly Ala
1163    8290              8295              8300
1164 Gly Gly Cys Cys Cys Cys Gly Gly Cys Ala Gly Cys Ala Gly Thr Cys
1165 8305              8310              8315              8320
1166 Thr Thr Gly Thr Thr Cys Ala Cys Ala Gly Ala Cys Cys Thr Thr Ala
1167              8325              8330              8335
1168 Gly Gly Cys Ala Cys Cys Ala Gly Ala Cys Thr Gly Gly Ala Gly Gly
1169         8340              8345              8350
1170 Cys Cys Cys Cys Cys Gly Gly Gly Cys Gly Cys Thr Gly Gly Cys Cys
1171         8355              8360              8365
1172 Thr Cys Cys Gly Cys Ala Cys Ala Thr Thr Cys Gly Thr Cys Thr Gly
1173    8370              8375              8380
1174 Cys Cys Thr Thr Cys Thr Cys Ala Cys Ala Gly Cys Thr Thr Thr Cys
1175 8385.              8390              8395              8400
1176 Cys Thr Gly Ala Gly Thr Cys Cys Gly Cys Thr Thr Gly Thr Cys Cys
1177              8405              8410              8415
1178 Ala Cys Ala Gly Cys Thr Cys Cys Thr Thr Gly Gly Thr Gly Gly Thr
1179         8420              8425              8430
1180 Thr Thr Cys Ala Thr Cys Thr Cys Cys Thr Cys Thr Gly Thr Gly Gly
1181    8435              8440              8445
1182 Gly Ala Gly Gly Ala Cys Ala Cys Ala Thr Cys Thr Cys Thr Gly Cys
1183    8450              8455              8460
```

RAW SEQUENCE LISTING                    DATE: 05/17/2001
PATENT APPLICATION:  US/09/778,963      TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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1184 Ala Gly Cys Cys Thr Cys Ala Ala Gly Ala Gly Thr Thr Ala Gly Gly
1185 8465                8470                8475                8480
1186 Cys Ala Gly Ala Gly Ala Cys Thr Cys Ala Ala Gly Thr Thr Ala Cys
1187           8485                8490                8495
1188 Ala Cys Cys Thr Thr Cys Cys Thr Cys Thr Cys Cys Thr Gly Gly Gly
1189           8500                8505                8510
1190 Gly Thr Thr Gly Gly Ala Ala Gly Ala Ala Ala Thr Gly Thr Thr Gly
1191           8515                8520                8525
1192 Ala Thr Gly Cys Cys Ala Gly Ala Gly Gly Gly Gly Thr Gly Ala Gly
1193      8530                8535                8540
1194 Gly Ala Thr Thr Gly Cys Gly Thr Gly Cys Gly Thr Cys Ala Thr Ala Thr
1195 8545                8550                8555                8560
1196 Gly Gly Ala Gly Cys Gly Thr Cys Cys Thr Gly Gly Gly Ala Cys Ala
1197           8565                8570                8575
1198 Ala Gly Cys Cys Thr Cys Ala Gly Gly Ala Thr Gly Ala Ala Ala Ala
1199           8580                8585                8590
1200 Gly Gly Ala Cys Ala Cys Ala Gly Ala Ala Gly Gly Cys Cys Ala Gly
1201           8595                8600                8605
1202 Ala Thr Gly Ala Gly Ala Ala Ala Gly Gly Thr Cys Thr Cys Cys Thr
1203      8610                8615                8620
1204 Cys Thr Cys Thr Cys Cys Thr Gly Gly Cys Ala Thr Ala Ala Cys Ala
1205 8625                8630                8635                8640
1206 Cys Cys Cys Ala Gly Cys Thr Thr Gly Gly Thr Thr Thr Gly Gly Gly
1207           8645                8650                8655
1208 Thr Gly Gly Cys Ala Gly Cys Thr Gly Gly Gly Ala Gly Ala Ala Cys
1209           8660                8665                8670
1210 Thr Thr Cys Thr Cys Thr Cys Cys Cys Ala Gly Cys Cys Cys Thr Gly
1211           8675                8680                8685
1212 Cys Ala Ala Cys Thr Cys Thr Thr Ala Cys Gly Cys Thr Cys Thr Gly
1213      8690                8695                8700
1214 Gly Thr Thr Cys Ala Gly Cys Thr Gly Cys Cys Thr Cys Thr Gly Cys
1215 8705                8710                8715                8720
1216 Ala Cys Cys Cys Cys Cys Thr Cys Cys Cys Ala Cys Cys Cys Cys Cys
1217           8725                8730                8735
1218 Ala Gly Cys Ala Cys Ala Cys Ala Cys Ala Cys Ala Ala Gly Thr Thr
1219           8740                8745                8750
1220 Gly Gly Cys Cys Cys Cys Cys Ala Gly Cys Thr Gly Cys Gly Cys Cys
1221           8755                8760                8765
1222 Thr Gly Ala Cys Ala Thr Thr Gly Ala Gly Cys Cys Ala Gly Thr Gly
1223      8770                8775                8780
1224 Gly Ala Cys Thr Cys Thr Gly Thr Gly Thr Cys Thr Gly Ala Ala Gly
1225 8785                8790                8795                8800
1226 Gly Gly Gly Gly Cys Gly Thr Gly Gly Cys Cys Ala Cys Ala Cys Cys
1227           8805                8810                8815
1228 Thr Cys Cys Thr Ala Gly Ala Cys Cys Ala Cys Gly Cys Cys Cys Ala
1229           8820                8825                8830
1230 Cys Cys Ala Cys Thr Thr Ala Gly Ala Cys Cys Ala Cys Gly Cys Cys
1231           8835                8840                8845
1232 Cys Ala Cys Cys Thr Cys Cys Thr Gly Ala Cys Cys Gly Cys Gly Thr
```

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

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1233    8850              8855              8860
1234 Thr Cys Cys Thr Cys Ala Gly Cys Cys Thr Cys Cys Thr Cys Thr Cys
1235 8865              8870              8875              8880
1236 Cys Thr Ala Gly Gly Thr Cys Cys Cys Thr Cys Cys Gly Cys Cys Cys
1237              8885              8890              8895
1238 Gly Ala Cys Ala Gly Thr Thr Gly Thr Gly Cys Thr Thr Thr Gly Thr
1239              8900              8905              8910
1240 Thr Gly Thr Gly Gly Thr Thr Gly Cys Ala Gly Cys Thr Gly Thr Thr
1241         8915              8920              8925
1242 Thr Thr Cys Gly Thr Gly Thr Cys Ala Thr Gly Thr Ala Thr Ala Gly
1243    8930              8935              8940
1244 Thr Ala Gly Thr Ala Gly Ala Ala Ala Thr Gly Gly Ala Ala Ala Thr
1245 8945              8950              8955              8960
1246 Cys Ala Thr Thr Gly Thr Ala Cys Thr Gly Thr Ala Ala Ala Ala Gly
1247              8965              8970              8975
1248 Cys Cys Thr Ala Gly Thr Gly Ala Cys Thr Cys Cys Cys Thr Cys Cys
1249              8980              8985              8990
1250 Thr Thr Gly Gly Cys Cys Ala Gly Gly Cys Cys Cys Thr Cys Ala Cys
1251         8995              9000              9005
1252 Cys Cys Ala Gly Thr Thr Cys Ala Gly Ala Thr Cys Cys Ala Cys Gly
1253    9010              9015              9020
1254 Gly Cys Cys Thr Cys Cys Ala Cys Cys Cys Gly Gly Gly Ala Cys Gly
1255 9025              9030              9035              9040
1256 Cys Cys Thr Thr Cys Cys Thr Cys Cys Thr Cys Thr Gly Cys Thr Cys
1257              9045              9050              9055
1258 Cys Cys Ala Ala Ala Cys Ala Gly Gly Gly Thr Thr Thr Cys Cys Gly
1259         9060              9065              9070
1260 Thr Gly Gly Cys Cys Thr Gly Thr Thr Thr Gly Cys Ala Gly Cys Thr
1261    9075              9080              9085
1262 Ala Gly Ala Cys Ala Thr Thr Gly Ala Cys Cys Thr Cys Cys Gly Cys
1263    9090              9095              9100
1264 Cys Ala Thr Thr Gly Ala Gly Cys Thr Cys Cys Ala Cys Gly Gly Thr
1265 9105              9110              9115              9120
1266 Thr Thr Ala Cys Ala Gly Ala Cys Ala Ala Thr Thr Gly Cys Ala Cys
1267         9125              9130              9135
1268 Ala Ala Gly Cys Gly Thr Gly Gly Gly Gly Thr Gly Gly Gly Cys Ala
1269         9140              9145              9150
1270 Gly Gly Cys Cys Ala Gly Gly Ala Cys Thr Gly Cys Thr Thr Thr Thr
1271       9155              9160              9165
1272 Thr Thr Thr Thr Ala Ala Thr Gly Cys Thr Cys Cys Cys Ala Thr Thr
1273    9170              9175              9180
1274 Thr Cys Ala Cys Ala Gly Ala Gly Gly Ala Thr Ala Cys Cys Ala Cys
1275 9185              9190              9195              9200
1276 Cys Gly Ala Gly Ala Cys Thr Cys Gly Gly Ala Gly Gly Gly Gly Ala
1277              9205              9210              9215
1278 Cys Ala Cys Gly Ala Thr Gly Ala Gly Cys Ala Cys Cys Ala Gly Gly
1279         9220              9225              9230
1280 Cys Cys Cys Ala Cys Cys Thr Thr Thr Gly Thr Cys Cys Cys Cys
1281       9235              9240              9245
```

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

```
1282 Thr Ala Gly Cys Ala Ala Ala Thr Thr Cys Ala Gly Gly Gly Thr Ala
1283      9250           9255           9260
1284 Cys Ala Gly Cys Thr Cys Cys Ala Cys Cys Thr Ala Gly Ala Ala Cys
1285 9265           9270           9275           9280
1286 Cys Ala Gly Gly Cys Thr Gly Cys Cys Cys Thr Cys Thr Ala Cys Thr
1287           9285           9290           9295
1288 Gly Thr Gly Cys Gly Thr Thr Cys Cys Thr Cys Gly Ala Gly
1289           9300           9305           9310
1290 Cys Ala Thr Thr Thr Ala Thr Thr Ala Ala Gly Cys Ala Cys Cys Thr
1291      9315           9320           9325
1292 Ala Cys Thr Gly Gly Gly Thr Gly Cys Thr Gly Gly Gly Thr Thr Cys
1293      9330           9335           9340
1294 Ala Cys Thr Gly Thr Gly Thr Cys Cys Thr Ala Gly Gly Ala Ala Ala
1295 9345           9350           9355           9360
1296 Cys Cys Ala Ala Gly Ala Gly Gly Gly Thr Cys Cys Cys Cys Ala Gly
1297           9365           9370           9375
1298 Thr Cys Cys Thr Gly Gly Cys Cys Thr Cys Thr Gly Cys Cys Cys Gly
1299           9380           9385           9390
1300 Cys Cys Cys Cys Thr Gly Cys Thr Gly Cys Cys Cys Cys Ala Cys Cys
1301      9395           9400           9405
1302 Ala Cys Cys Thr Thr Cys Thr Gly Cys Ala Cys Ala Cys Ala Cys Ala
1303      9410           9415           9420
1304 Gly Cys Gly Gly Thr Gly Gly Gly Gly Ala Gly Gly Cys Gly Gly Gly
1305 9425           9430           9435           9440
1306 Gly Ala Gly Gly Ala Gly Cys Ala Gly Cys Thr Gly Gly Gly Ala Cys
1307           9445           9450           9455
1308 Cys Cys Ala Gly Ala Ala Cys Thr Gly Ala Gly Cys Cys Thr Gly Gly
1309           9460           9465           9470
1310 Gly Ala Gly Gly Gly Ala Thr Cys Cys Gly Ala Cys Ala Gly Ala Ala
1311           9475           9480           9485
1312 Ala Ala Gly Cys Thr Cys Ala Gly Gly Gly Cys Gly Gly Gly Thr Cys
1313      9490           9495           9500
1314 Thr Thr Cys Thr Cys Cys Thr Thr Gly Thr Gly Cys Cys Cys Gly Gly
1315 9505           9510           9515           9520
1316 Gly Ala Thr Thr Gly Gly Gly Cys Thr Ala Thr Gly Cys Thr Gly Gly
1317           9525           9530           9535
1318 Gly Thr Ala Cys Cys Ala Cys Cys Ala Thr Gly Thr Ala Cys Thr Cys
1319           9540           9545           9550
1320 Ala Gly Gly Cys Ala Thr Gly Gly Thr Gly Gly Gly Thr Thr Thr Thr
1321      9555           9560           9565
1322 Gly Ala Ala Cys Cys Cys Ala Thr Ala Ala Ala Cys Cys Ala Ala Ala
1323      9570           9575           9580
1324 Gly Gly Cys Cys Cys Thr Thr Gly Thr Cys Ala Thr Cys Ala Gly Cys
1325 9585           9590           9595           9600
1326 Thr Cys Thr Thr Ala Ala Cys Ala Ala Gly Thr Ala Thr Ala Thr Thr
1327           9605           9610           9615
1328 Thr Thr Gly Thr Ala Thr Thr Thr Thr Ala Ala Thr Cys Thr Cys Thr
1329           9620           9625           9630
1330 Cys Thr Ala Ala Ala Cys Ala Thr Ala Thr Thr Gly Ala Ala Gly Thr
```

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

```
1331         9635              9640              9645
1332 Thr Thr Thr Ala Gly Gly Gly Cys Cys Cys Thr Ala Ala Gly Gly Ala
1333      9650              9655              9660
1334 Ala Cys Cys Thr Thr Ala Gly Thr Gly Ala Thr Cys Thr Thr Cys Thr
1335 9665              9670              9675              9680
1336 Ala Thr Thr Gly Gly Gly Thr Cys Thr Thr Thr Cys Thr Gly Ala Gly
1337           9685              9690              9695
1338 Gly Thr Thr Cys Ala Gly Ala Gly Ala Gly Gly Gly Thr Ala Ala Gly
1339           9700              9705      .       9710
1340 Thr Ala Ala Cys Thr Thr Cys Cys Thr Cys Cys Ala Gly Gly Thr Cys
1341      9715              9720              9725
1342 Ala Cys Ala Cys Ala Gly Cys Ala Ala Gly Thr Cys Thr Gly Thr Gly
1343      9730              9735              9740
1344 Gly Gly Thr Gly Gly Cys Ala Gly Ala Ala Gly Cys Ala Ala Gly Cys
1345 9745              9750              9755              9760
1346 Thr Ala Gly Cys Gly Cys Thr Gly Gly Gly Cys Ala Thr Thr Cys Ala
1347           9765              9770              9775
1348 Gly Thr Ala Cys Ala Thr Ala Cys Cys Ala Cys Gly Ala Thr Gly Thr
1349           9780              9785              9790
1350 Gly Cys Thr Cys Cys Cys Thr Cys Thr Cys Thr Thr Gly Ala Thr Gly
1351      9795              9800              9805          .
1352 Cys Thr Thr Gly Gly Cys Cys Cys Cys Thr Gly Gly Gly Gly Cys Cys
1353      9810              9815              9820
1354 Thr Thr Cys Ala Gly Gly Gly Cys Thr Thr Thr Gly Gly Gly Ala Cys
1355 9825              9830              9835              9840
1356 Ala Thr Cys Thr Thr Gly Thr Cys Cys Thr Cys Ala Ala Cys Cys Cys
1357           9845              9850              9855
1358 Thr Cys Thr Cys Cys Cys Thr Ala Gly Ala Thr Cys Ala Gly Thr Cys
1359           9860              9865              9870
1360 Thr Gly Thr Gly Ala Gly Gly Gly Thr Cys Cys Cys Thr Gly Thr Ala
1361      9875              9880              9885
1362 Gly Ala Thr Ala Thr Thr Gly Thr Gly Thr Ala Cys Ala Cys Cys Ala
1363      9890              9895              9900
1364 Thr Gly Cys Cys Cys Ala Thr Gly Thr Ala Thr Ala Thr Ala Cys Ala
1365 9905              9910              9915              9920
1366 Ala Gly Thr Ala Cys Ala Cys Ala Cys Ala Gly Ala Thr Gly Thr Ala
1367           9925              9930              9935
1368 Cys Ala Cys Ala Cys Ala Gly Ala Thr Gly Thr Ala Cys Ala Cys Ala
1369           9940              9945              9950
1370 Thr Gly Cys Thr Cys Cys Ala Gly Cys Cys Cys Cys Ala Gly Cys Thr
1371      9955              9960              9965
1372 Cys Thr Gly Cys Ala Thr Ala Cys Cys Thr Gly Cys Ala Cys Cys Thr
1373      9970              9975              9980
1374 Gly Cys Ala Cys Cys Cys Ala Gly Cys Cys Thr Thr Gly Gly Cys
1375 9985              9990              9995              10000
1376 Cys Cys Cys Thr Gly Cys Cys Thr Gly Cys Gly Thr Cys Thr Gly Thr
1377           10005             10010             10015
1378 Gly Cys Thr Cys Ala Ala Ala Gly Cys Ala Gly Cys Ala Gly Cys Thr
1379           10020             10025             10030
```

```
       1380 Cys Cys Ala Ala Cys Cys Cys Thr Gly Cys Cys Thr Cys Thr Gly Thr
       1381       10035           10040           10045
       1382 Cys Cys Cys Cys Thr Thr Cys Cys Cys Cys Ala Cys Cys Cys Ala Cys
E--> 1383    10050           10055           10060         ①
       1384 Thr Gly Cys Cys Thr Gly Ala Gly Cys Cys Thr Thr Cys Thr Gly Ala
E--> 1385 0065          10070           10075           10080
       1386 Gly Cys Ala Gly Ala Cys Cys Ala Gly Gly Thr Ala Cys Cys Thr Thr
       1387           10085           10090           10095
       1388 Gly Gly Cys Thr Gly Cys Ala Cys Cys Gly Gly Thr Gly Thr Gly Thr
       1389           10100           10105           10110
       1390 Gly Gly Cys Cys Cys Gly Cys Thr Cys Thr Cys Ala Cys Cys Cys Ala
       1391       10115           10120           10125
       1392 Gly Gly Cys Ala Cys Ala Gly Cys Cys Cys Gly Cys Cys Ala Cys
E--> 1393    10130           10135           10140         ①
       1394 Cys Ala Thr Gly Gly Ala Thr Cys Thr Cys Cys Gly Thr Gly Thr Ala
E--> 1395 0145          10150           10155           10160
       1396 Cys Ala Cys Thr Ala Thr Cys Ala Ala Thr Ala Ala Ala Ala Gly Thr
       1397           10165           10170           10175
       1398 Gly Gly Gly Thr Thr Thr Gly Thr Thr Ala Cys Ala Ala Ala Gly Cys
       1399           10180           10185           10190
       1400 Cys Gly Thr Gly Thr Cys Cys Thr Thr Gly Cys Cys Cys Ala Thr Gly
       1401       10195           10200           10205
       1402 Thr Gly Thr Ala Thr Thr Thr Thr Thr Thr Gly Thr Ala Thr Thr Thr
E--> 1403    10210           10215           10220         ①
       1404 Cys Cys Ala Ala Gly Ala Gly Gly Ala Gly Gly Thr Gly Thr Gly Cys
E--> 1405 0225          10230           10235           10240
       1406 Cys Cys Cys Thr Thr Thr Cys Cys Ala Gly Ala Cys Cys Ala Ala Ala
       1407           10245           10250           10255
       1408 Gly Cys Thr Gly Gly Cys Cys Thr Thr Thr Cys Cys Cys Thr Cys Cys
       1409           10260           10265           10270
       1410 Cys Ala Ala Ala Ala Thr Gly Cys Ala Cys Cys Thr Gly Cys Cys Gly
       1411       10275           10280           10285
       1412 Thr Gly Thr Ala Cys Cys Cys Thr Gly Gly Cys Cys Cys Thr Gly Ala
E--> 1413    10290           10295           10300         ①
       1414 Gly Gly Gly Thr Cys Ala Gly Cys Ala Cys Thr Gly Ala Gly Thr Cys
E--> 1415 0305          10310           10315           10320
       1416 Cys Ala Cys Cys Thr Thr Cys Ala Ala Gly Thr Gly Thr Ala Ala Gly
       1417           10325           10330           10335
       1418 Thr Gly Thr Gly Gly Gly Gly Ala Gly Ala Gly Gly Gly Gly Gly Ala
       1419           10340           10345           10350
       1420 Thr Ala Ala Gly Thr Cys Cys Cys Cys Cys Ala Gly Ala Thr Gly Gly
       1421       10355           10360           10365
       1422 Ala Ala Gly Gly Thr Gly Ala Thr Gly Cys Cys Cys Cys Thr Cys Cys Thr
E--> 1423    10370           10375           10380         ①
       1424 Thr Cys Ala Gly Cys Cys Thr Gly Gly Cys Cys Cys Thr Cys Cys Thr
E--> 1425 0385          10390           10395           10400
       1426 Gly Gly Gly Thr Cys Cys Thr Cys Cys Gly Gly Gly Thr Gly Thr Gly
       1427           10405           10410           10415
       1428 Thr Gly Thr Ala Cys Cys Gly Ala Gly Gly Thr Gly Thr Cys Thr Gly
```

*Misaligned amino acid numbering. When you have 5 digits, double-space between the first 2 amino acids. This will allow the entire number to process correctly.*

*Thr Cys Ala Cys Ala*
*10385*

RAW SEQUENCE LISTING          DATE: 05/17/2001
PATENT APPLICATION:  US/09/778,963     TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

```
     1429          10420          10425          10430
     1430 Thr Gly Thr Cys Cys Ala Cys Ala Ala Ala Gly Ala Ala Gly Gly Gly
     1431      10435          10440          10445
     1432 Gly Cys Cys Cys Cys Cys Gly Thr Gly Gly Ala Cys Cys Ala Thr Thr
E--> 1433      10450          10455          10460           (1)
     1434 Ala Gly Cys Thr Cys Cys Ala Gly Gly Ala Gly Gly Ala Thr Cys Thr
E--> 1435 (0465)          10470          10475          10480
     1436 Cys Cys Gly Thr Gly Thr Cys Thr Gly Ala Gly Thr Thr Cys Thr Thr
     1437          10485          10490          10495
     1438 Thr Gly Thr Gly Ala Thr Thr Cys Thr Gly Thr Ala Cys Ala Gly
     1439          10500          10505          10510
     1440 Cys Ala Gly Ala Ala Thr Thr Thr Cys Ala Cys Cys Cys Gly Cys
     1441      10515          10520          10525
     1442 Ala Gly Gly Gly Gly Ala Cys Ala Gly Thr Thr Gly Gly Cys Ala Ala
E--> 1443      10530          10535          10540           (1)
     1444 Thr Cys Thr Cys Thr Gly Gly Ala Ala Ala Cys Cys Thr Thr Thr Thr
E--> 1445 (0545)          10550          10555          10560
     1446 Cys Cys Ala Ala Gly Cys Cys Thr Gly Gly Gly Gly Cys Thr Gly Gly
     1447          10565          10570          10575
     1448 Gly Gly Cys Thr Gly Cys Thr Ala Cys Thr Cys Thr Cys Ala Thr Cys
     1449          10580          10585          10590
     1450 Thr Gly Gly Thr Gly Gly Gly Thr Gly Gly Ala Gly Gly Cys Cys Ala
     1451      10595          10600          10605
     1452 Gly Gly Gly Ala Cys Ala Cys Cys Ala Thr Thr Cys Ala Gly Thr Ala
E--> 1453      10610          10615          10620           (1)
     1454 Thr Cys Cys Thr Cys Cys Ala Ala Cys Gly Cys Ala Cys Ala Gly Gly
E--> 1455 (0625)          10630          10635          10640
     1456 Ala Thr Gly Cys Cys Cys Cys Thr Cys Cys Ala Cys Cys Cys Cys Cys
     1457          10645          10650          10655
     1458 Ala Cys Cys Cys Cys Ala Cys Thr Gly Ala Gly Ala Ala Thr Thr Ala
     1459          10660          10665          10670
     1460 Thr Cys Thr Gly Gly Cys Cys Thr Cys Ala Ala Ala Thr Gly Cys Cys
     1461      10675          10680          10685
     1462 Ala Ala Gly Cys Gly Thr Gly Gly Gly Cys Ala Gly Cys Cys Thr Thr
E--> 1463      10690          10695          10700           (1)
     1464 Ala Cys Thr Thr Ala Gly Ala Cys Thr Cys Ala Cys Cys Cys Cys Ala
E--> 1465 (0705)          10710          10715          10720
     1466 Gly Gly Gly Gly Cys Thr Gly Gly Gly Ala Cys Ala Cys Gly Cys Cys
     1467          10725          10730          10735
     1468 Cys Cys Cys Ala Cys Cys Thr Gly Cys Gly Thr Gly Thr Gly Ala Thr
     1469          10740          10745          10750
     1470 Gly Gly Ala Thr Thr Thr Gly Thr Thr Gly Gly Ala Cys Cys Ala Cys
     1471      10755          10760          10765
     1472 Ala Thr Thr Cys Thr Gly Gly Ala Cys Gly Gly Ala Cys Cys Cys Cys
E--> 1473      10770          10775          10780           (1)
     1474 Ala Cys Ala Gly Cys Ala Thr Ala Ala Gly Cys Ala Cys Thr Cys Cys
E--> 1475 (0785)          10790          10795          10800
     1476 Thr Gly Thr Gly Ala Ala Gly Thr Gly Ala Gly Ala Cys Ala Gly Gly
     1477          10805          10810          10815
```

*misaligned amino acid numbering*

```
        1478 Ala Thr Gly Thr Gly Gly Gly Thr Gly Ala Gly Gly Ala Thr Gly Gly
        1479          10820          10825          10830
        1480 Ala Ala Ala Gly Thr Gly Gly Ala Gly Gly Cys Thr Gly Ala Gly Gly
        1481          10835          10840          10845
        1482 Gly Ala Gly Ala Ala Gly Gly Thr Cys Thr Gly Gly Gly Cys Cys Cys
E-->    1483      10850          10855          10860             1
        1484 Thr Gly Ala Cys Cys Ala Ala Cys Ala Cys Gly Gly Ala Ala Thr Gly
E-->    1485  0865          10870          10875          10880
        1486 Thr Gly Cys Cys Cys Cys Cys Thr Gly Gly Gly Ala Cys Thr Gly Ala
        1487          10885          10890          10895
        1488 Gly Ala Gly Gly Cys Thr Thr Cys Cys Cys Thr Gly Gly Gly Cys Ala
        1489          10900          10905          10910
        1490 Gly Ala Gly Gly Gly Ala Ala Ala Gly Gly Ala Gly Gly Ala Ala Gly
        1491          10915          10920          10925
        1492 Thr Cys Ala Gly Thr Gly Ala Gly Gly Thr Ala Ala Ala Ala Thr Ala
E-->    1493      10930          10935          10940             1
        1494 Cys Thr Cys Cys Cys Thr Gly Thr Gly Thr Gly Thr Thr Thr Thr Ala
E-->    1495  0945              10950          10955          10960
        1496 Cys Cys Cys Ala Gly Cys Gly Ala Gly Thr Cys Thr Cys Ala Cys Gly
        1497          10965          10970          10975
        1498 Cys Cys Ala Thr Cys Cys Thr Ala Thr Cys Ala Cys Cys Cys Ala Gly
        1499          10980          10985          10990
        1500 Cys Cys Cys Cys Gly Ala Gly Gly Gly Ala Ala Gly Cys Cys Cys Ala
        1501          10995          11000          11005
        1502 Cys Thr Cys Ala Thr Gly Thr Thr Cys Ala Cys Cys Cys Cys Ala Thr
E-->    1503      11010          11015          11020             1
        1504 Cys Thr Gly Ala Gly Cys Ala Thr Thr Thr Ala Gly Gly Cys Thr Cys
E-->    1505  1025          11030          11035          11040
        1506 Ala Gly Ala Gly Ala Gly Cys Thr Cys Ala Ala Thr Ala Thr Cys Thr
        1507          11045          11050          11055
        1508 Thr Gly Thr Cys Cys Ala Ala Gly Ala Thr Gly Gly Cys Ala Cys Ala
        1509          11060          11065          11070
        1510 Gly Cys Thr Gly Gly Thr Gly Ala Ala Gly Thr Gly Gly Cys Ala Gly
        1511          11075          11080          11085
        1512 Ala Thr Cys Ala Gly Ala Gly Ala Thr Thr Cys Ala Ala Cys Ala Cys
E-->    1513      11090          11095          11100             1
        1514 Cys Ala Gly Ala Gly Gly Cys Thr Gly Thr Cys Thr Gly Ala Thr Thr
E-->    1515  1105          11110          11115          11120
        1516 Thr Cys Cys Gly Thr Cys Thr Gly Gly Cys Thr Gly Ala Ala Gly Ala
        1517          11125          11130          11135
        1518 Ala Ala Gly Ala Thr Thr Thr Thr Gly Cys Ala Thr Cys Ala Gly Gly
        1519          11140          11145          11150
        1520 Gly Ala Gly Gly Thr Gly Gly Ala Ala Ala Cys Cys Ala Thr Cys Thr
        1521          11155          11160          11165
        1522 Gly Thr Gly Cys Thr Thr Thr Thr Gly Ala Thr Cys Ala Gly Cys Ala
E-->    1523      11170          11175          11180             1
        1524 Ala Ala Thr Gly Cys Cys Ala Cys Cys Ala Gly Cys Ala Gly Gly Ala
E-->    1525  1185          11190          11195          11200
        1526 Thr Cys Ala Gly Gly Gly Ala Gly Cys Cys Ala Gly Gly Cys Cys Ala
```

*Same*

RAW SEQUENCE LISTING                    DATE: 05/17/2001
PATENT APPLICATION:   US/09/778,963     TIME: 08:43:07

Input Set : A:\Seqlist.txt
Output Set: N:\CRF3\05172001\I778963.raw

```
1527              11205          11210          11215
1528 Thr Ala Ala Ala Gly
1529       11220
```

**VERIFICATION SUMMARY**                          DATE: 05/17/2001
PATENT APPLICATION:  **US/09/778,963**            TIME: 08:43:08

Input Set : **A:\Seqlist.txt**
Output Set: **N:\CRF3\05172001\I778963.raw**

L:1383 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:3
M:332 Repeated in SeqNo=3